Alberta Energy Regulator

Upstream Petroleum Industry Flaring and Venting Report

Industry Performance for Year Ending December 31, 2012

October 2013

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ST60B-2013: Upstream Petroleum Industry Flaring and Venting Report, 2012

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Executive Summary

Background

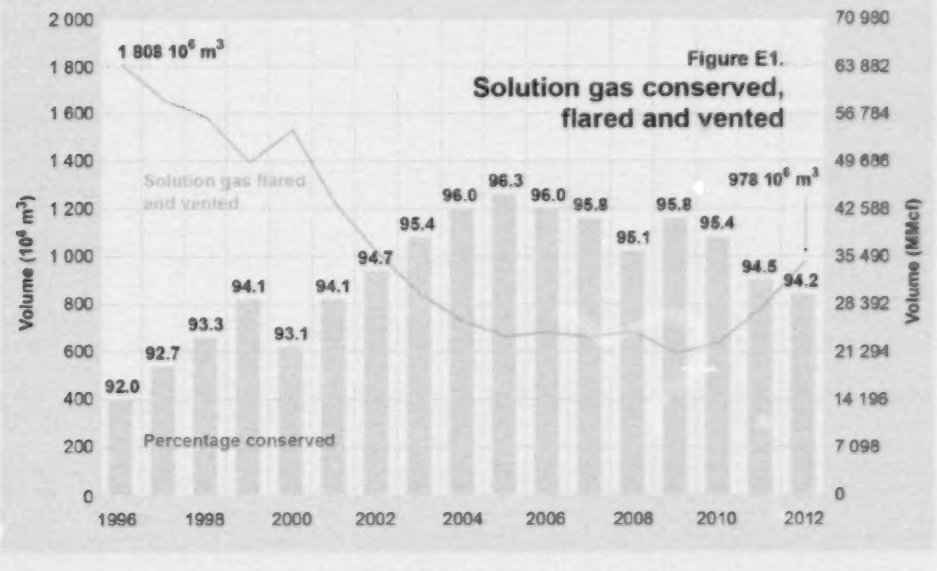
Published annually, the Alberta Energy Regulator (AER) *ST60B: Upstream Petroleum Industry Flaring and Venting Report* fulfills the AER's commitment to report on upstream industry flaring and venting performance, as set out in *Directive 060: Upstream Petroleum Industry Flaring, Incinerating, and Venting*. The report's primary focus is on solution gas flaring and venting from crude oil and crude bitumen production operations. The report also includes flared and vented volumes from in situ bitumen facilities, gas batteries, well testing, gas plants, gas gathering systems, natural gas transmission lines, and coalbed methane and shale gas activities. The report does not include flared and vented volumes from bitumen upgraders and oil sands mine operations. The data used to compile the report are obtained from Canada's Petroleum Information Network (PETRINEX) and the AER.

For this report:

- Crude bitumen is oil produced within the AER-designated oil sands areas that has a density of 920 kilograms per cubic metre (kg/m^3) or greater.
- Crude oil is all other crude oil production in the province, including oil with a density of 920 kg/m^3 or greater produced outside the designated oil sands areas.
- Conservation = $\frac{\text{[Volume of gas produced − (Volume of gas flared + Volume of gas vented)]}}{\text{Volume of gas produced}}$
- All reported flared volumes include gas that was incinerated, unless otherwise stated.
- Venting is defined as the noncombusted release of gas to the atmosphere.

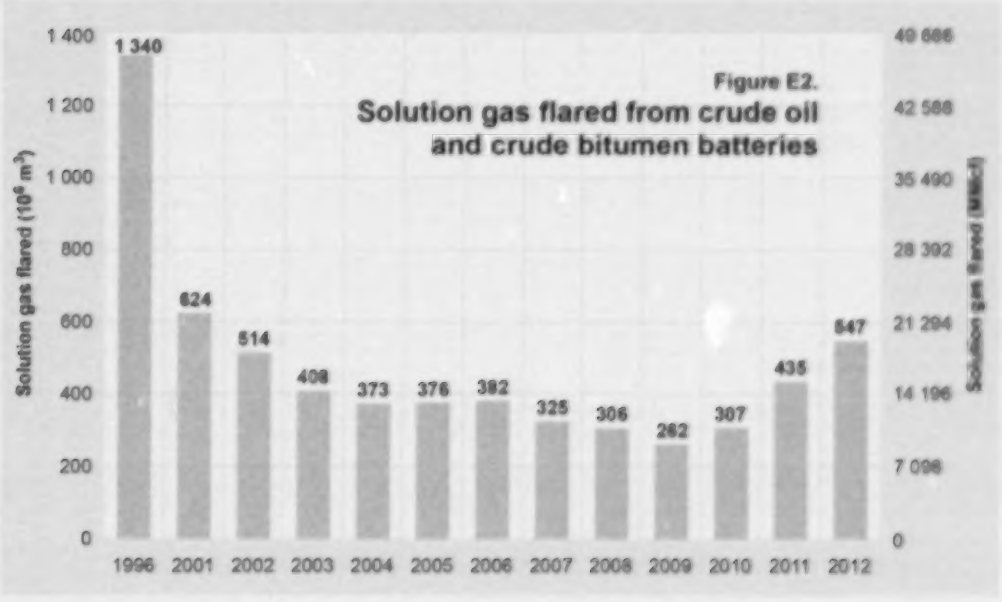
Solution Gas Conservation

Solution gas conservation in 2012 was 94.2 per cent.



Solution Gas Flared

Solution gas flared in 2012 was 59.1 per cent less than the 1996 flaring baseline of 1340 million cubic metres (10^6 m^3) (47 562 million cubic feet [MMcf]).

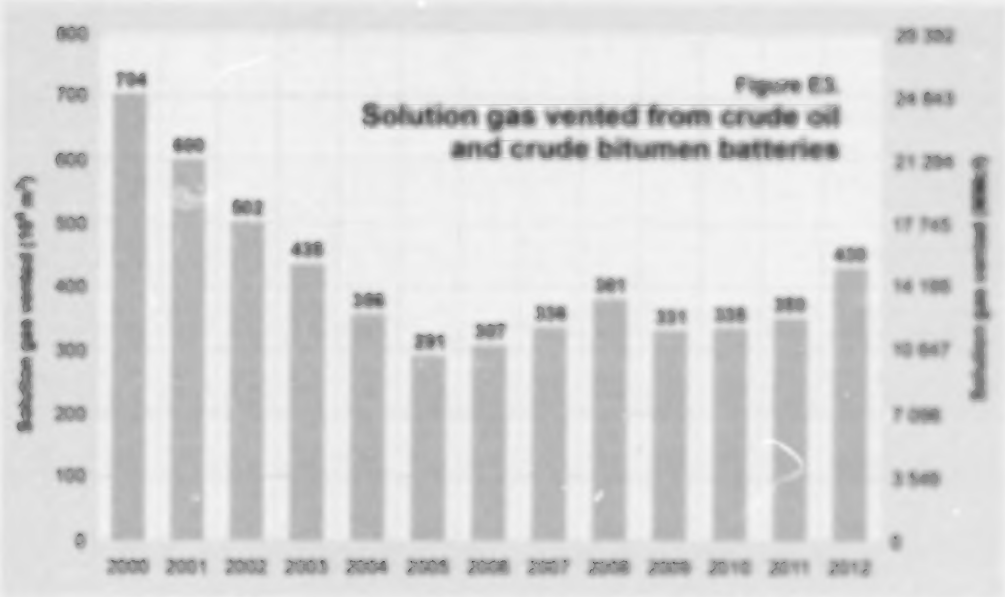


The increase in solution gas flared in 2012 (25.9 per cent) from the previous year can be primarily attributed to an increase in new crude oil production and low gas prices, which makes the economic viability of conservation more challenging.

Solution gas flared from crude oil batteries increased by 22.9 per cent compared with 2011. Solution gas flared from crude bitumen batteries increased by 50.6 per cent compared with 2011.

Solution Gas Vented

Solution gas vented in 2012 was 38.9 per cent less than the 2000 venting baseline of 704 10^3 m^3 (24 988 MMcf).



In 2012, there was a 25.2 per cent increase in venting from crude bitumen batteries to 298 10^3 m^3 (10 578 MMcf) from 238 10^3 m^3 (8444 MMcf) in 2011. This can be attributed to 262 more crude bitumen batteries operating in 2012 compared with 2011. There was also an 18.0 per cent increase in venting from crude oil batteries to 132 10^3 m^3 (4698 MMcf) from 112 10^3 m^3 (3982 MMcf) in 2011, attributable to 964 more crude oil batteries operating in 2012 compared with 2011.

Discussion

In 2012, crude bitumen production increased by 17.7 per cent to 59.2 10^3 m^3 (2101 MMcf) from 50.3 10^3 m^3 (1785 MMcf) in 2011. Crude oil production increased by 14.1 per cent in 2012 to 31.6 10^3 m^3 (1121 MMcf) from 27.7 10^3 m^3 (983 MMcf) in 2011.

Solution gas conservation increased steadily from 1996 until 2005 except for 2000. Between 2006 and 2012, the conservation rate fluctuated, with the overall rate declining. In 2012, solution gas conservation was 94.2 per cent, compared with 96.3 per cent in 2005. This drop was mainly due to low natural gas prices, which made solution gas conservation economically challenging.

The viability of solution gas conservation is determined by an economic test, as specified in section 2 of *Directive 060*. In times of high labour and services costs and relatively low gas prices, conservation may not be economically viable.

For information on flaring, incinerating, and venting requirements, see *Directive 060*. For questions about flaring, incinerating, and venting, including about this report, contact the AER Technical Operations Group through the Customer Contact Centre at 403-297-8311 or toll free at 1-855-297-8311.

1 Introduction

Reducing routine flaring and venting of solution gas has been a priority of the Alberta Energy Regulator (AER) since 1958, the year the Turner Valley Gas Conservation Board (predecessor to the AER) was formed to address reservoir management problems in southern Alberta.[1]

Alberta energy resource conservation, public safety, environmental protection, and information dissemination are core AER functions. The AER's activities, including its partnership work, on routine flaring and venting reduction address conservation and public safety. ST60B: *Upstream Petroleum Industry Flaring and Venting Report* published annually, fulfills the AER's information mandate on flaring and venting and is part of a commitment made in *Directive 060: Upstream Petroleum Industry Flaring, Incinerating, and Venting* (section 11) to make flaring and venting data more accessible.

The primary focus of ST60B is on solution gas flaring and venting from crude oil and crude bitumen production operations. The report also includes flared and vented volumes from in situ bitumen facilities, gas batteries, well testing, gas plants, gas gathering systems, natural gas transmission lines, and coalbed methane and shale gas activities. The report does not include flared and vented volumes from bitumen upgraders and oil sands mine operations. The data used to compile the report are obtained from Canada's Petroleum Information Network (PETRINET) and the AER.

For this report:

- Crude bitumen is oil produced within the AER-designated oil sands areas[2] that has a density of 920 kilograms per cubic metre (kg/m^3) or greater.
- Crude oil is all other crude oil production in the province, including oil with a density of 920 kg/m^3 or greater produced outside the designated oil sands areas.
- Conservation = $\frac{\text{(volume of gas produced − (volume of gas flared + volume of gas vented))}}{\text{volume of gas produced}}$
- All reported flared volumes include gas that was incinerated, unless otherwise stated.
- Venting is defined as the unconstructed release of gas to the atmosphere.

For information on flaring, incinerating, and venting requirements, see *Directive 060*. For questions about flaring, incinerating, and venting, including about this report, contact the AER Technical Operations Group through the Customer Contact Centre at 403-297-8311 or toll-free at 1-855-297-8311.

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[1] The AER has had several predecessors. Although activities may have been carried over under one of these, for simplicity the AER will be used from this point forward.

[2] See ST98-2012: *Alberta Energy Reserves 2012 and Supply/Demand Outlook*, figure 4B-1, available on the AER website, www.aer.ca.

Background

The AER, in cooperation with the consensus-based, multistakeholder Flaring and Venting Project Team of the Clean Air Strategic Alliance (CASA), helped develop flaring and venting management recommendations for the Province of Alberta. The recommendations included determining flaring and venting baselines, flaring reduction targets, and operational requirements for the upstream oil and gas industry. The AER adopted the recommendations put forward by CASA and incorporated them into the 2007 edition of Guide 60: Upstream Petroleum Industry Flaring Guide (subsequently, Directive 060). The AER will continue to support the CASA approach and work with industry and other stakeholders to reduce the volume of solution gas flared and vented in Alberta.

Alberta's success in reducing flaring and venting has been acknowledged internationally. In 2002, the World Bank invited Alberta to participate in a global gas flaring reduction initiative. The success of Alberta's flaring reduction efforts and the consensus CASA approach were attractive to the World Bank. Drawing on what it learned from the AER and other international jurisdictions, the World Bank developed and published its voluntary standard for global gas flaring reduction. The voluntary standard sets out a framework on how to reduce flaring and venting associated with crude oil production worldwide. In 2004, the AER formally endorsed the Global Gas Flaring Reduction Standard, and the AER continues to provide technical assistance in developing global standards and in developing regulatory capacity in member countries. Information about the World Bank's Global Gas Flaring Reduction Standard is available from the World Bank Global Gas Flaring Reduction Partnership [www.worldbank.org/ggfr (link)].

The CASA Flaring and Venting Project Team issued its final report in December 2002. The report contained two consensus recommendations: (1) update the net gas/oil ratio (GOR) provisions in the 2000 Directive 060 to update it to take into account inflation, and (2) investigate whether new limits and/or no-new-limits for hours of use of these limits can be developed. The AER Production Operations Section is currently working on a project to investigate hours of use limits and/or no-limits on use of flare can be developed. The project report is currently under internal review and will be presented to CASA for review.

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3 Generation Gas Planning and Investing Performance

The 2020 Report's related case 3-1 can count by steps the 2020 Planning Inventory, and the 2021 Lawful Limitation case 3-2 can count by steps the 2040 Lighting Inventory. Maintenance of the Lawful Limitation into the case Restricted case the Planning and Invest case Hub Lighting can grow to million 1 case 1, Lawful Limitation.

Table 1 Generation gas Planning Limitation compared with 1998 Inventory

Year	Generation (%)
200	0
202	0
207	0
208	0
209	0
209	0
209	0
209	0
207	0
206	0
206	0
205	0
211	0
211	0

Table 2 Generation gas Lighting Limitation compared with 1998 Inventory

Year	Generation (%)
202	0
203	0
203	0
203	0
203	0
208	0
207	0
208	0
209	0
213	0
211	0
211	0

[illegible] [illegible] [illegible] [

Flaring from crude oil batteries increased to 877 10^3 m^3 (16 920 MW&h) in 2012 from 788 10^3 m^3 (15 768 MW&h) in 2011. This represents an increase of 89 10^3 m^3 (1151 MW&h), or 22.9 per cent.

Venting from crude oil batteries increased to 152 10^3 m^3 (4098 MW&h) in 2012 from 112 10^3 m^3 (3082 MW&h) in 2011. This represents an increase of 20 10^3 m^3 (715 MW&h), or 18.0 per cent.

Flaring from crude bitumen batteries increased to 71 10^3 m^3 (2915 MW&h) in 2012 from 47 10^3 m^3 (1861 MW&h) in 2011. This represents an increase of 24 10^3 m^3 (852 MW&h), or 50.6 per cent.

Venting from crude bitumen batteries increased to 298 10^3 m^3 (10 578 MW&h) in 2012 from 230 10^3 m^3 (8444 MW&h) in 2011. This represents an increase of 68 10^3 m^3 (2134 MW&h), or 29.2 per cent.

The decrease in solution gas conservation from 98.9 per cent in 2011 to 98.2 per cent in 2012 and increases in solution gas flaring and venting can be correlated with the following:

1) The price for natural gas remained low during 2012, making solution gas conservation economically challenging.

2) The number of crude oil batteries reporting production in 2012 increased by 964, from 11 213 in 2011 to 12 177 in 2012. This resulted in more solution gas flaring and venting at crude oil batteries in 2012.

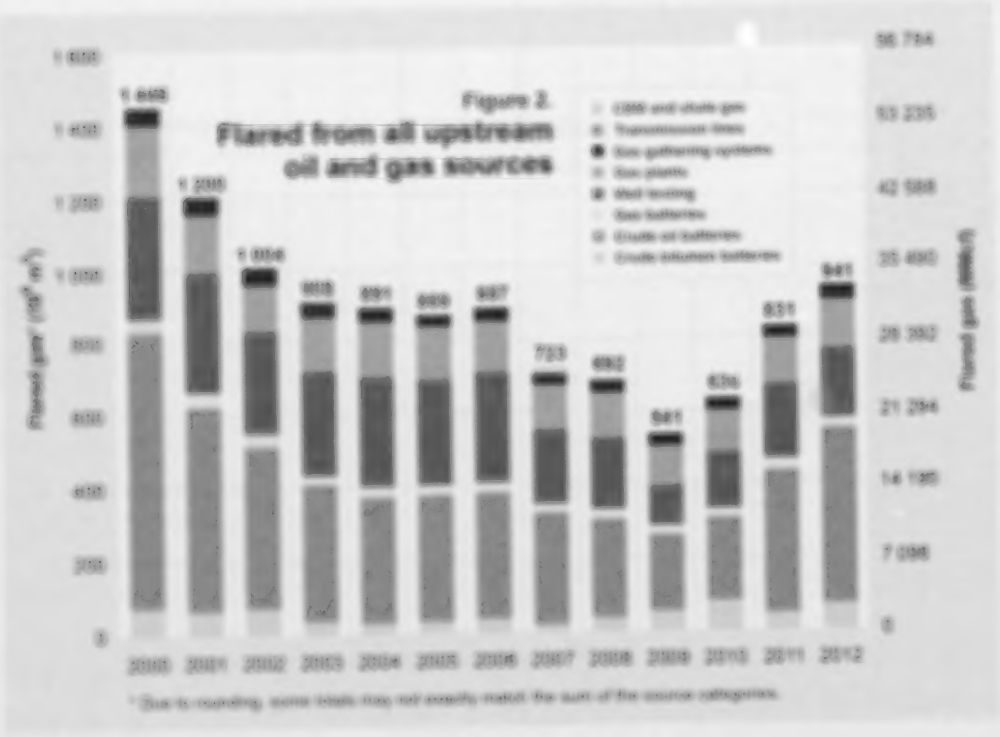
3) The number of crude bitumen batteries reporting production in 2012 increased by 282, from 2703 in 2011 to 2985 in 2012. This resulted in more solution gas flaring and venting at crude bitumen batteries in 2012.

The oil and gas industry is constructively using a large portion of produced solution gas from crude bitumen operations as fuel to run pump motors and tank heaters. Unfortunately, conserving the remaining small volume of gas is more economically challenging. Although it recognizes this economical challenge, the AER continues to be concerned with increases in flaring and venting with respect to bitumen production.

More information on flaring and venting can be found on the AER website, www.aer.ca.

4 Flaring from All Upstream Oil and Gas Sources, 2000–2012

The total volume flared from all upstream oil and gas sources in 2012 was 941 10^3 m^3 (33 379 MMcf), an increase of 13.2 per cent from 2011 (see figure 2).



The data in table 4 were used to prepare figure 2.

In 2012, of 1082 gas plants reporting receipts, 424 gas plants flared a total of 134 10^3 m^3 (4743 MMcf), a 5.2 per cent increase from 2011. All gas plant subtypes contribute to this report; they include sweet gas, acid gas, acid gas injection, sulphur recovery, straddle, and fractionation. A total of 25 plants accounted for about 50 per cent of the volumes flared at gas plants in 2012.

In 2012, 50 per cent of the total volume flared from gas gathering systems came from 9 of the 4974 systems.

Flaring from gas batteries decreased by 11.7 per cent in 2012 compared with 2011.

Excluding well tests conducted in-line, the number of well tests that flared in 2012 was 1850, compared with a total of 2379 in 2011, a decrease of 529, or 22.2 per cent. The total volume of gas flared for all well tests decreased by 6.8 per cent to 189 10^3 m^3 (6717 MMcf).

Table 4. Flaring from upstream oil and gas sources (10^6 m^3)*

Year	Crude bitumen batteries	Crude oil batteries	Gas batteries	Well testing	Gas plants**	Gas gathering systems**	Transmission lines	CBM & shale gas	Total	Total (MMcf)
2000	76	755	36	335	196	48	0	0	1 446	51 324
2001	68	556	41	326	159	50	0	0	1 200	42 593
2002	73	441	35	280	127	48	0	0	1 004	35 636
2003	36	372	25	284	149	42	0	0	908	32 229
2004	29	343	28	300	153	38	0	0	891	31 625
2005	33	344	27	287	147	31	0	0	869	30 809
2006	39	343	28	301	140	36	0	0	887	31 483
2007	20	305	25	201	124	28	0	20	723	25 662
2008	38	268	28	192	126	32	2	6	692	24 526
2009	54	208	26	106	111	31	2	3	541	19 208
2010	61	226	25	154	114	33	2	1	636	22 562
2011	47	366	32	203	127	32	1	1	831	29 496
2012	**71**	**477**	**28**	**189**	**134**	**40**	**1**	**1**	**941**	**33 379**
2012 vs. 2011	50.6%	22.9%	-11.7%	-6.8%	5.2%	25.4%	-17.1%	-14.7%	13.2%	13.2%

* Due to rounding, some totals may not exactly match the sum of the source categories.

** The figures for gas plants and gas gathering systems include both flared and vented volumes for the years 2000 to 2006.

When considering all well tests conducted in 2012, the average gas volume flared per test was 102.30 10^3 m^3 (3.6 MMcf), compared with 83.20 10^3 m^3 (3.0 MMcf) per test in 2011, an increase of 23.0 per cent (see table 5). This can be attributed to an increase in the number of horizontal multistage fracturing operations in 2012. It takes longer to recover load fluids and clean out wells in these operations, which results in greater flare volumes and flaring duration.

The reported flare volumes during well testing may have included some carbon dioxide (CO_2) and nitrogen (N_2). An AER review of 26 batteries that flared during well testing showed that about 10 per cent of the flared gas was either CO_2 or N_2. The volumes of these gases were subtracted by the AER from the reported flared volumes to get the actual hydrocarbon gas that was flared at these batteries.

Table 5. Average volume of gas flared per well test

Year	Volume (10^3 m^3)
2005	34.60
2006	40.82
2007	40.06
2008	45.60
2009	39.25
2010	63.51
2011	83.20
2012	102.30

Directive 060 requires that operators seek alternatives to well test flaring. Operators are required to test in-line when it is both economically viable and safe to do so. Testing in-line can mean either connecting to an existing gas gathering system directly or laying a temporary surface pipeline to connect a well to a remote gas gathering system. In either method, the gas from the well test is conserved.

The data in table 6 represent the flaring from well tests conducted by 25 companies in 2012 and the average volume of gas flared per test.

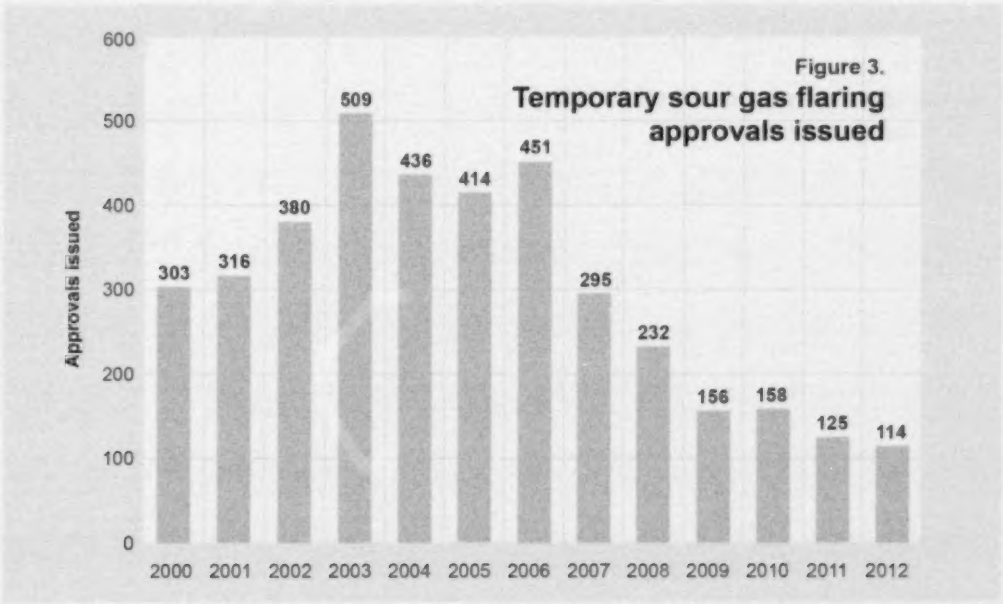
Table 6. Well test flaring, 2012; ranked by number of well tests conducted

Company	Well tests (#)	Gas flared (10^6 m^3)	Gas flared (MMcf)	Average gas flared per test (10^3 m^3)	Average gas flared per test (MMcf)
Encana Corporation	617	16.1	571.7	26.1	0.9
Shell Canada Limited	176	1.1	38.3	6.1	0.2
ConocoPhillips Canada Operations Ltd.	104	9.3	331.6	89.8	3.2
TAQA North Ltd.	87	12.0	424.3	137.4	4.9
Tourmaline Oil Corp.	72	9.4	332.3	130.0	4.6
Vermilion Energy Inc.	66	1.3	47.4	20.2	0.7
Peyto Exploration & Development Corp.	55	3.1	109.3	56.0	2.0
Long Run Exploration Ltd.	55	0.6	21.8	11.2	0.4
Bonavista Energy Corporation	54	14.0	496.7	259.2	9.2
Canadian Natural Resources Limited	43	3.2	112.5	73.7	2.6
Athabasca Oil Corporation	42	4.3	152.7	102.4	3.6
ARC Resources Ltd.	37	3.8	134.5	102.4	3.6
Cenovus Energy Inc.	33	0.3	9.0	7.7	0.3
TORC Oil & Gas Ltd.	32	2.2	76.9	67.7	2.4
Bellatrix Exploration Ltd.	32	10.7	379.6	334.2	11.9
Birchcliff Energy Ltd.	29	5.6	199.7	194.0	6.9
Angle Energy Inc.	28	1.9	68.9	69.4	2.5
Devon NEC Corporation	25	1.5	53.3	60.1	2.1
Sinopec Daylight Energy Ltd.	23	4.5	159.9	195.9	7.0
Penn West Petroleum Ltd.	23	3.0	106.2	130.1	4.6
Exshaw Oil Corp.	22	1.4	48.3	61.8	2.2
ConocoPhillips Canada Resources Corp.	22	2.4	83.5	106.9	3.8
Devon Canada Corporation	21	3.1	109.1	146.3	5.2
Advantage Oil & Gas Ltd.	18	4.2	150.8	236.0	8.4
Celtic Exploration ULC	17	9.9	352.6	584.4	20.7
Total	**1733**	**128.7**	**4570.8**		
% of total well tests	**81.9%**	**67.4%**	**67.4%**		

In cases of sour gas or sour oil well testing, if the gas to be flared contains greater than 5 per cent hydrogen sulphide (H_2S) and is to be flared from a temporary flare stack (i.e., not from a facility stack), a

sour gas flaring approval is required. The temporary sour gas approval process involves a detailed review of air quality dispersion modelling and is conducted to ensure that Alberta Environment and Sustainable Resource Development's Alberta Ambient Air Quality Objectives (AAAQO) will not be exceeded. The application for a sour gas flaring approval may also include plans that document how any predicted exceedances of the AAAQO will be mitigated to ensure compliance with the AAAQO. When the AER is satisfied that the AAAQO will be met and that levels of all other parameters, such as flared volumes and sulphur emissions, are justified and minimized, a temporary sour gas flaring approval may be issued.

In 2012, the AER issued 114 temporary sour gas flaring approvals, a decrease from the 125 issued in 2011 (see figure 3).



The reason for the decreases in sour gas flaring approvals since 2006 may be twofold. First, market conditions for natural gas have not been as favourable in recent years, which may have resulted in upstream oil and gas licensees rebalancing their capital and operating budgets.

Second, with the release of the revised *Directive 060* at the end of January 2007, a new allowance to flare small volumes of gas containing H_2S volumes in excess of 5 per cent without a sour gas flaring approval was introduced. With this new allowance, companies are still required to conduct dispersion modelling if the H_2S concentration of the gas to be flared is in excess of 1 per cent, and proper notification to the AER and public at least 24 hours in advance of flaring operations is still required.

5 Venting from All Upstream Oil and Gas Sources, 2000–2012

The most significant source of venting is crude bitumen batteries, where solution gas is vented from the production casing annulus at a large number of individual wells. In some instances, small volumes of solution gas are also vented from treaters and stock tanks at crude oil and crude bitumen batteries. Venting during well testing is primarily from shallow, sweet, low-deliverability gas wells, including coalbed methane (CBM) wells.

In *ST60B-2004: Upstream Petroleum Industry Flaring and Venting Report, 2003*, the AER made commitments to identify and set out a number of conservation measures aimed at reducing the volumes of solution gas vented from crude bitumen operations. As a result of industry implementing these measures, there was a net decrease in venting from crude bitumen batteries between 2004 and 2007. However, in 2008 this trend was reversed and there was an increase of 16.9 per cent compared with 2004. In 2012, there was a 36.7 per cent increase in venting from crude bitumen batteries compared with 2004.

In 2012, venting from crude bitumen batteries increased by 25.2 per cent to 298 10^6 m^3 (10 578 MMcf) from 238 10^6 m^3 (8444 MMcf) in 2011. Crude bitumen production grew by 8.90 10^6 m^3 to 59.2 10^6 m^3 in 2012, an increase of 17.7 per cent compared with 2011, with 262 more crude bitumen batteries operating.

Venting from crude oil batteries increased by 18.0 per cent to 132 10^6 m^3 (4698 MMcf) from 112 10^6 m^3 (3982 MMcf) in 2011. Crude oil production grew by 3.90 10^6 m^3 to 31.6 10^6 m^3 in 2012, an increase of 14.1 per cent compared with 2011, with 964 more crude oil batteries operating.

The increase in solution gas venting from both crude bitumen and crude oil batteries can be correlated with more crude oil and bitumen wells operating in 2012 compared with 2011 and the ongoing low price of gas.

Figure 4 shows vented volumes broken down by source for 2000 to 2012. The total volume vented from all upstream oil and gas sources in 2012 was 501 10^6 m^3 (17 786 MMcf), an increase of 28.7 per cent from 2011.

The data in table 7 were used to prepare figure 4.

The vent volumes during well testing reported to the AER may have included some CO_2 and N_2. An AER review of 19 batteries that vented during well testing showed that about 60 per cent of the vented gas was either CO_2 or N_2. The volumes of these gases were subtracted by the AER from the reported vented volumes to get the actual hydrocarbon gas that was vented at these batteries.

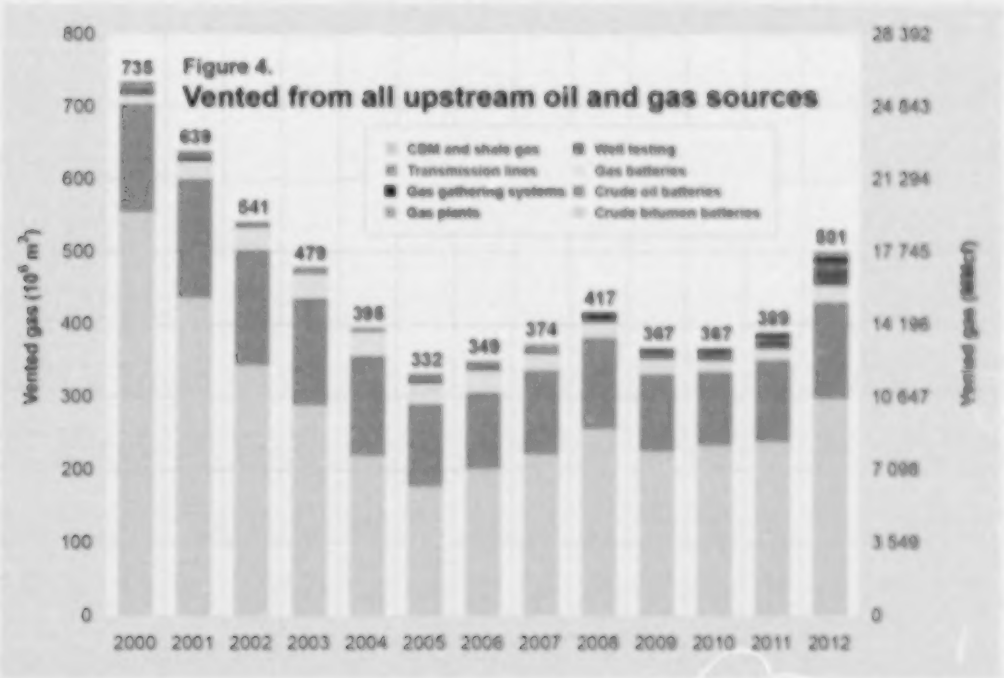


Table 7. Venting from upstream oil and gas sources (10^6 m^3)*

Year	Crude bitumen batteries	Crude oil batteries	Gas batteries	Well testing	Gas plant**	Gas gathering systems**	Transmission lines	CBM & shale gas	Total	Total (MMcf)
2000	554	150	12	7	-	-	12	0	735	26 086
2001	436	164	24	7	-	-	8	0	639	22 681
2002	343	159	31	3	-	-	5	0	541	19 202
2003	288	147	34	2	-	-	8	0	479	17 002
2004	219	137	33	1	-	-	5	0	396	14 020
2005	177	113	28	6	-	-	8	0	332	11 784
2006	201	105	30	5	-	-	8	0	349	12 387
2007	221	115	23	4	0	0	8	3	374	13 299
2008	256	125	21	5	2	5	3	0	417	14 797
2009	225	106	21	6	3	3	3	0.2	367	13 033
2010	233	101	16	7	3	4	3	0.1	367	13 026
2011	238	112	16	10	4	5	4	0.4	389	13 821
2012	**298**	**132**	**23**	**26**	**5**	**7**	**9**	**0.9**	**501**	**17 786**
2012 vs. 2011	25.2%	18.0%	45.9%	167.5%	25.0%	40.0%	94.1%	111.3%	28.7%	28.7%

* Due to rounding, some totals may not exactly match the sum of the source categories.

** Venting numbers were not available for 2000 to 2006.

Table 7 shows an increase in 2012 compared with 2011 in volumes vented from each upstream oil and gas source.

Although the AER does not collect data on the emission of greenhouse gases per se, it is concerned about the impact that these gases can have on the environment. Accordingly, *Directive 060* requires that vented gas that can sustain continuous combustion and that is uneconomic to conserve must be burned.

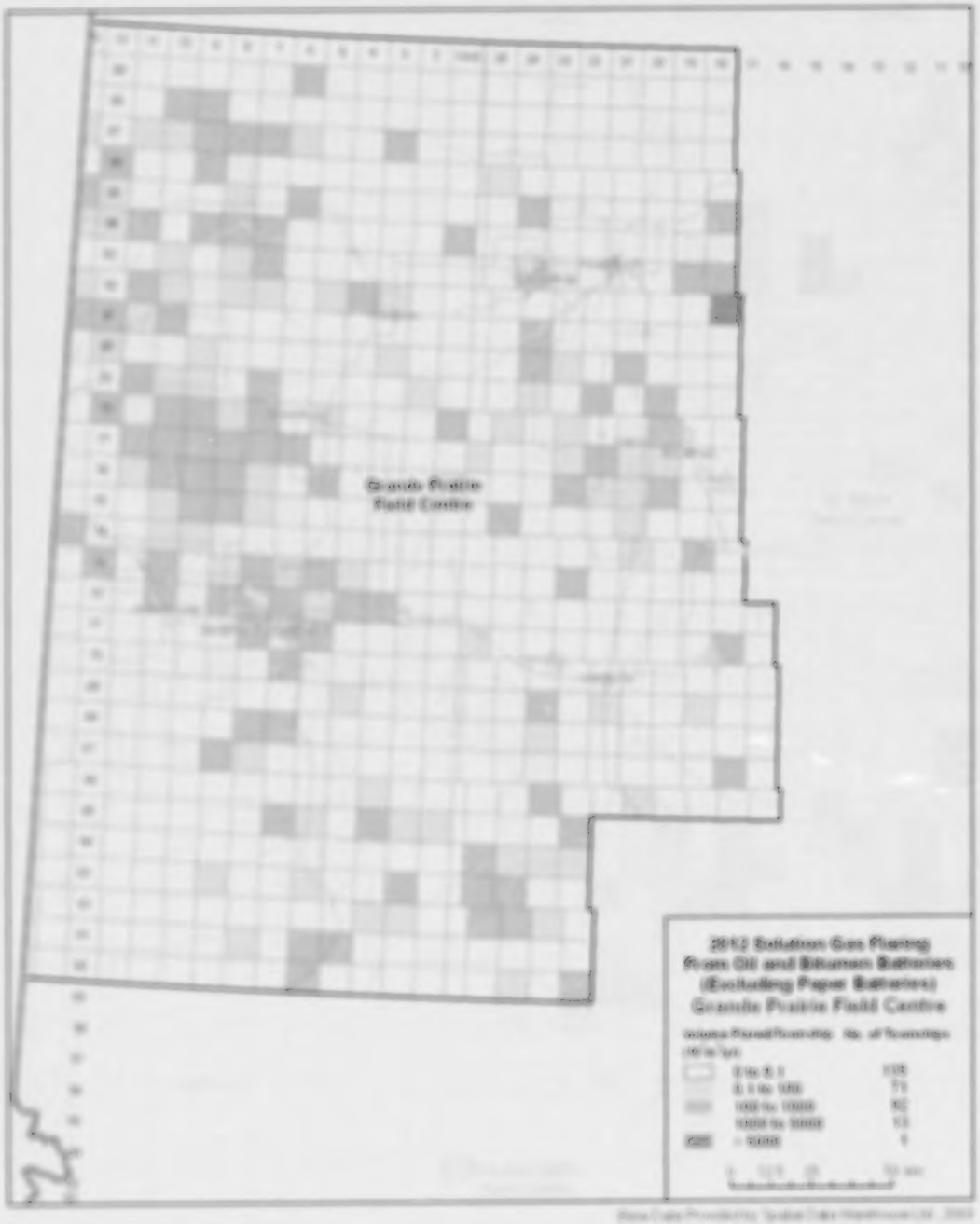
6 Solution Gas Flaring and Venting Maps

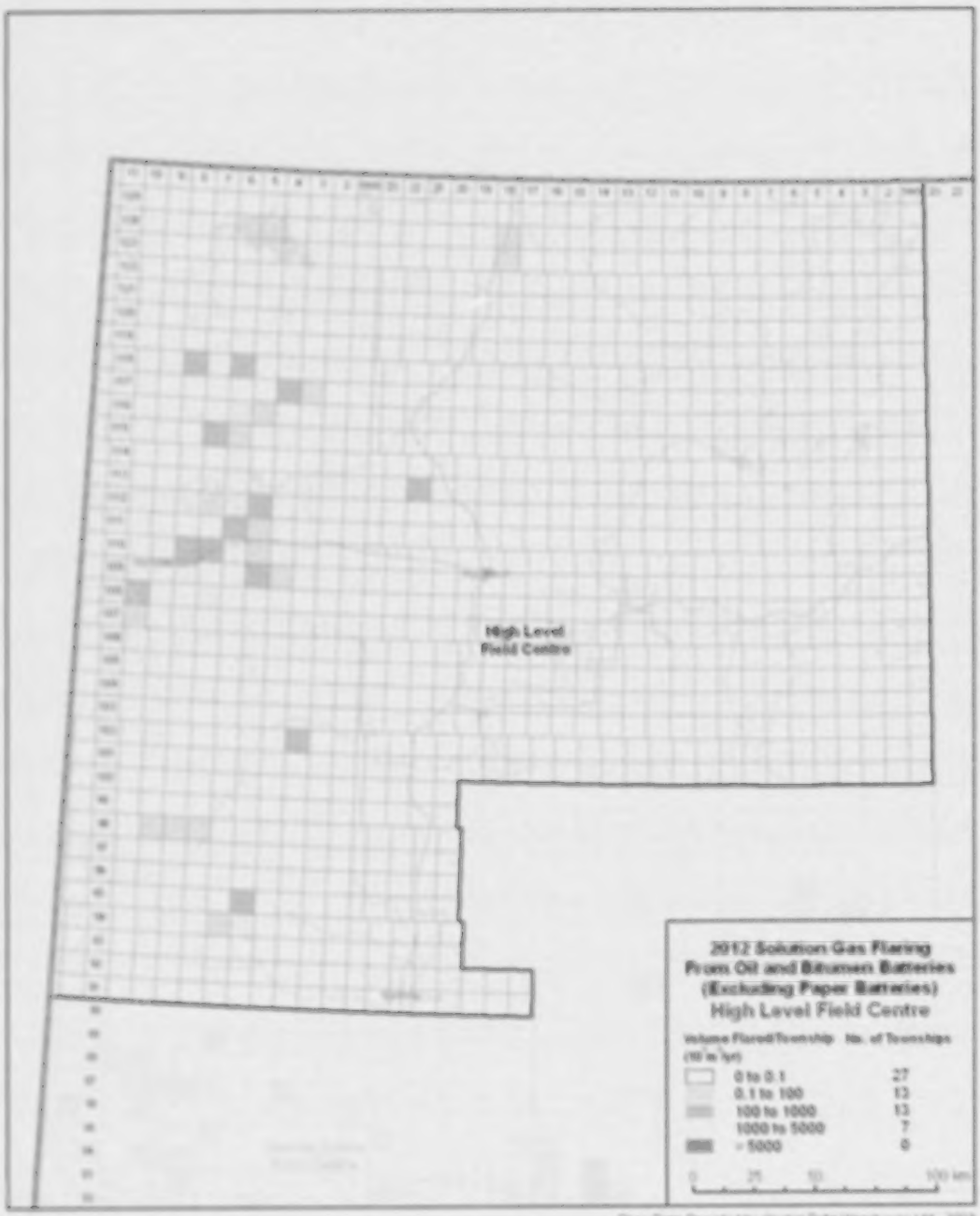
In the maps that follow, solution gas flaring and venting data are depicted geographically by township within the province as a whole and within each of the AER field centre area boundaries. The maps graphically show the townships in which flaring and venting volumes are significant.

The maps do not display data derived from "paper batteries." Paper batteries are an administrative reporting entity used for production accountability to report production from multiple wells to a single reporting location. Including paper batteries in these maps could result in the incorrect representation of flaring and venting data in townships where the flaring or venting did not actually occur. Flaring and venting from paper batteries are accounted for in the ranking tables of this report.

- Solution Gas Flaring
  - Alberta
  - Bonnyville Field Centre Area
  - Drayton Valley Field Centre Area
  - Grande Prairie Field Centre Area
  - High Level Field Centre Area
  - Medicine Hat Field Centre Area
  - Midnight Field Centre Area
  - Red Deer Field Centre Area
  - St. Albert Field Centre Area
  - Wainwright Field Centre Area
- Solution Gas Venting
  - Alberta
  - Bonnyville Field Centre Area
  - Drayton Valley Field Centre Area
  - Grande Prairie Field Centre Area
  - High Level Field Centre Area
  - Medicine Hat Field Centre Area
  - Midnight Field Centre Area
  - Red Deer Field Centre Area
  - St. Albert Field Centre Area
  - Wainwright Field Centre Area

Source data: Provided by Spatial Data Warehouse Ltd., 2012


Grande Prairie
Field Centre
2012 Solution Gas Flaring
From Oil and Bitumen Batteries
(Excluding Paper Batteries)
Grande Prairie Field Centre



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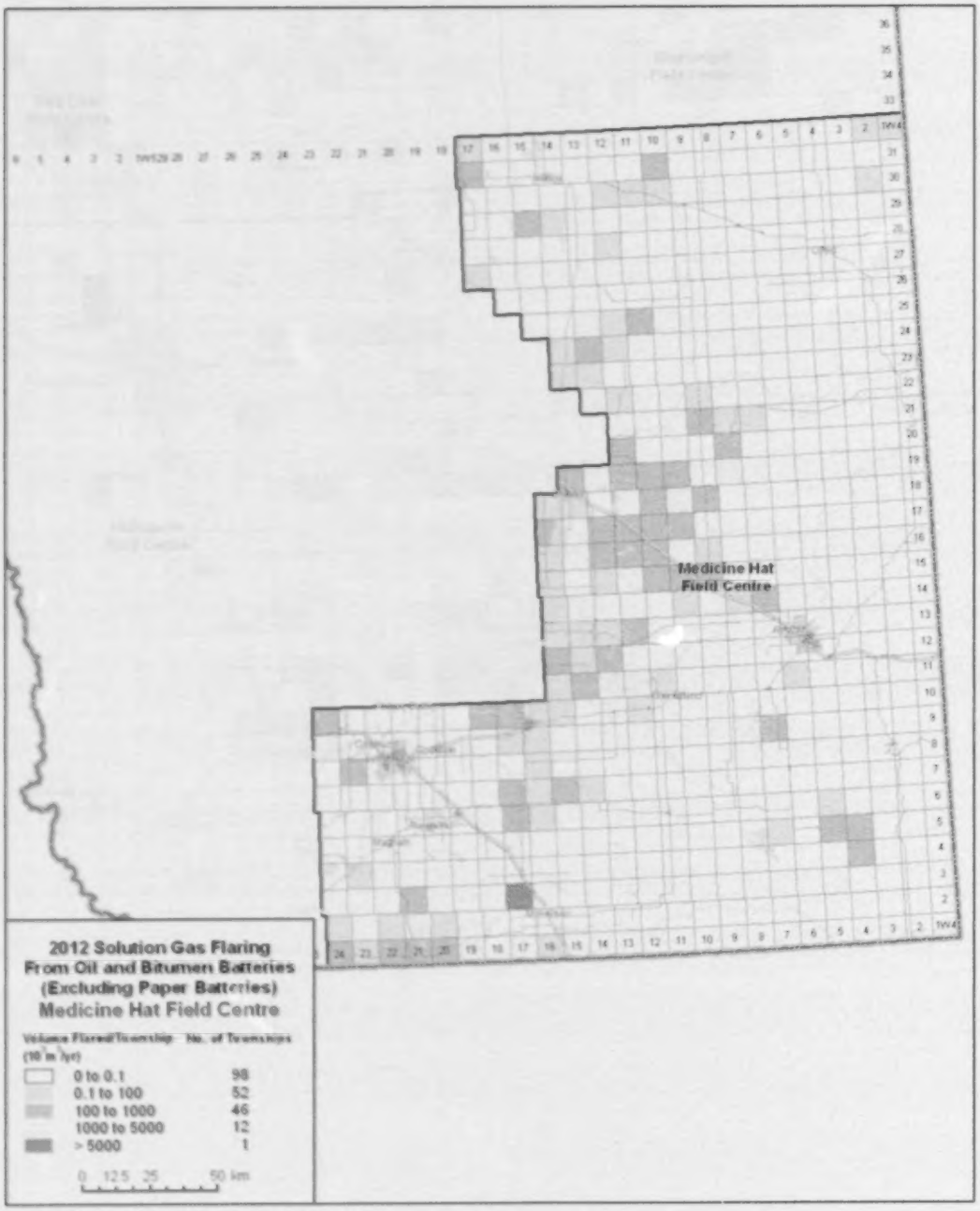

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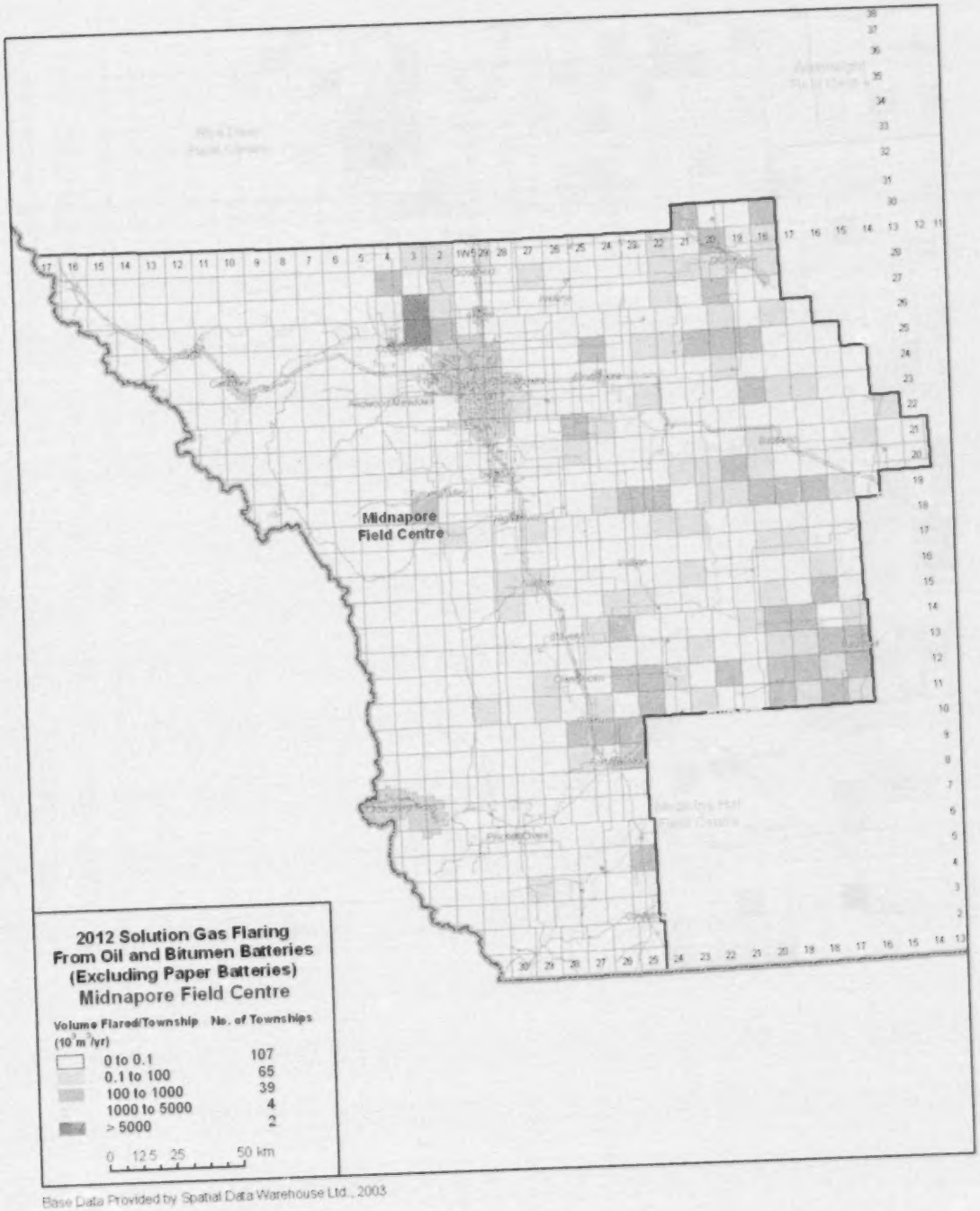

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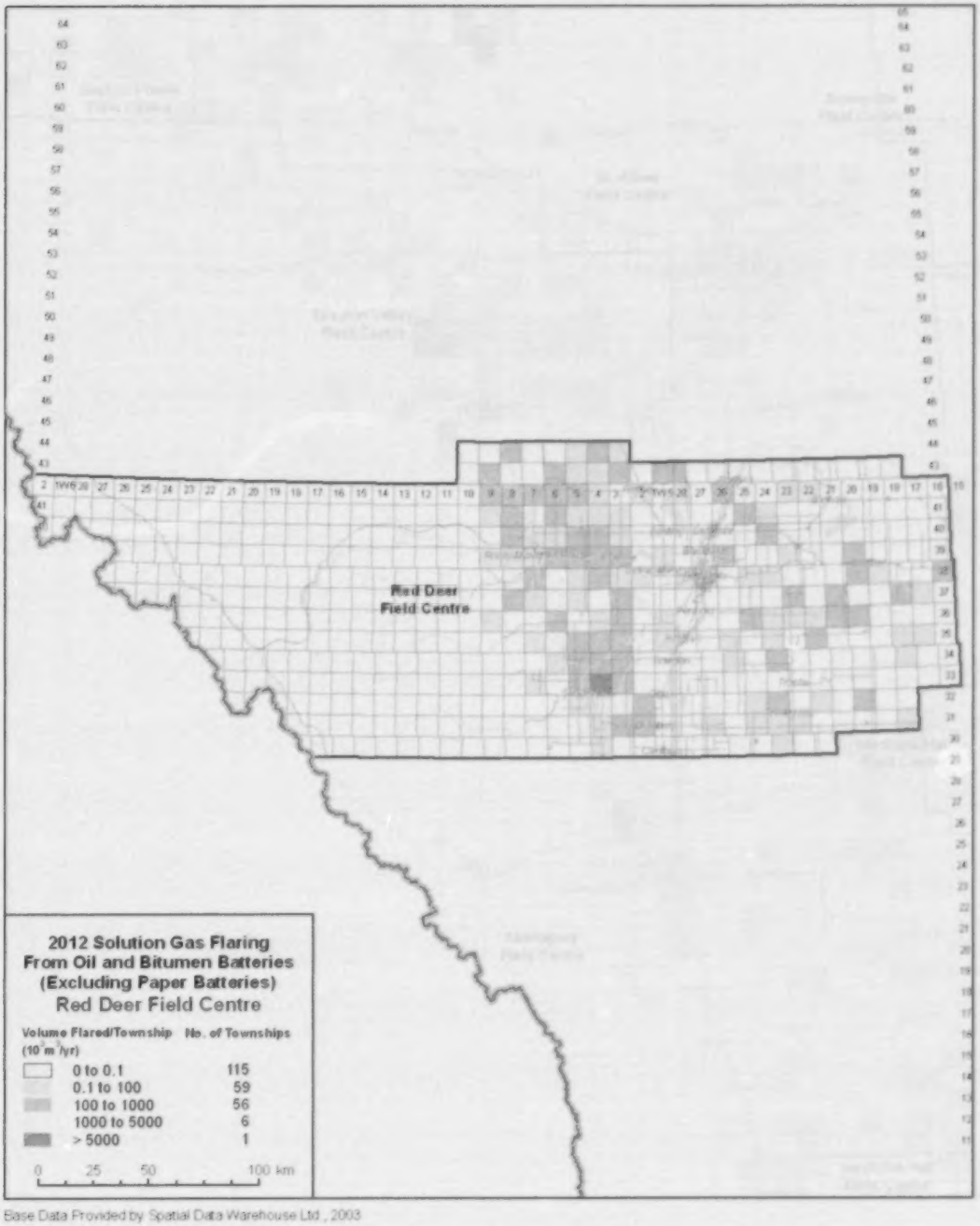

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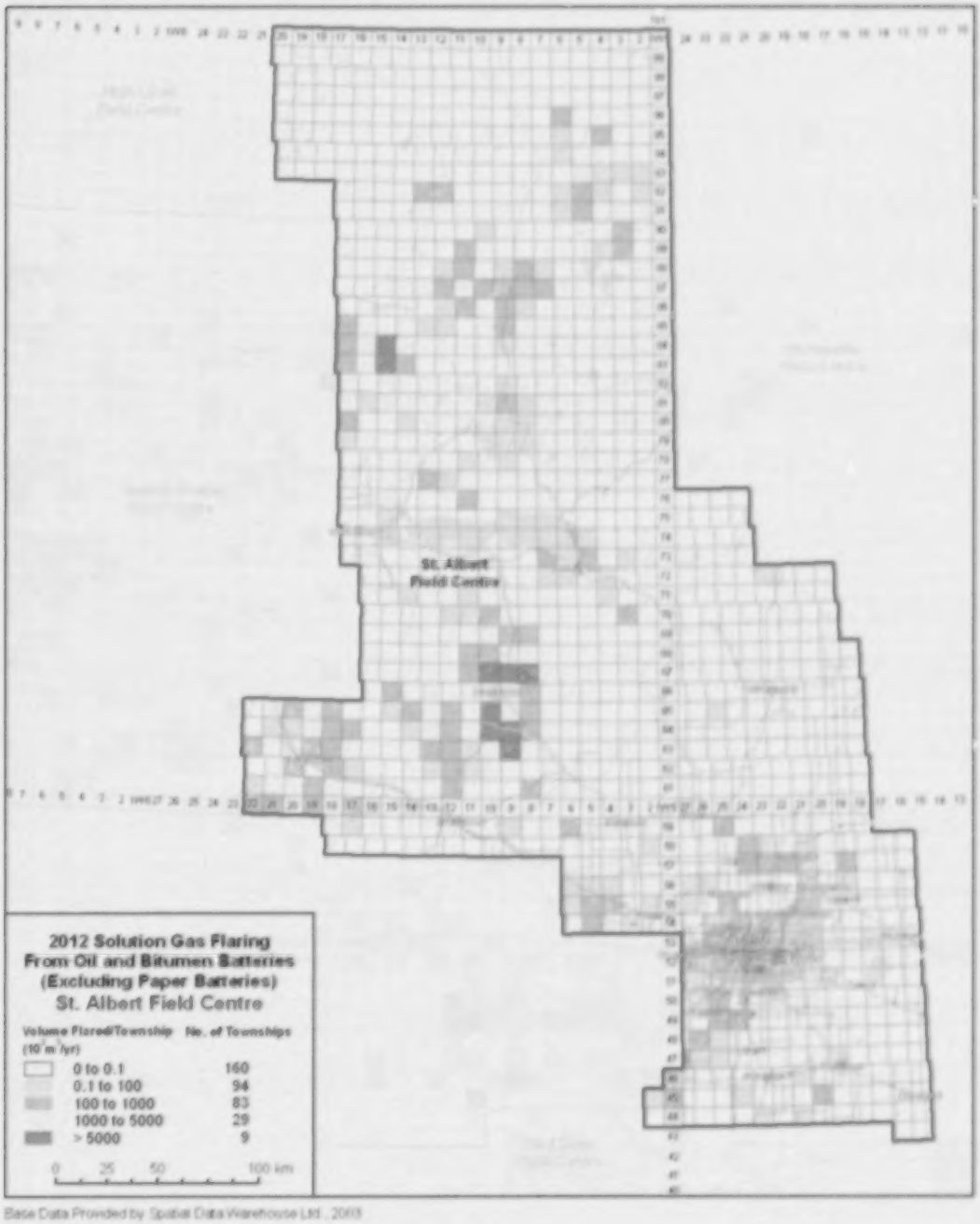

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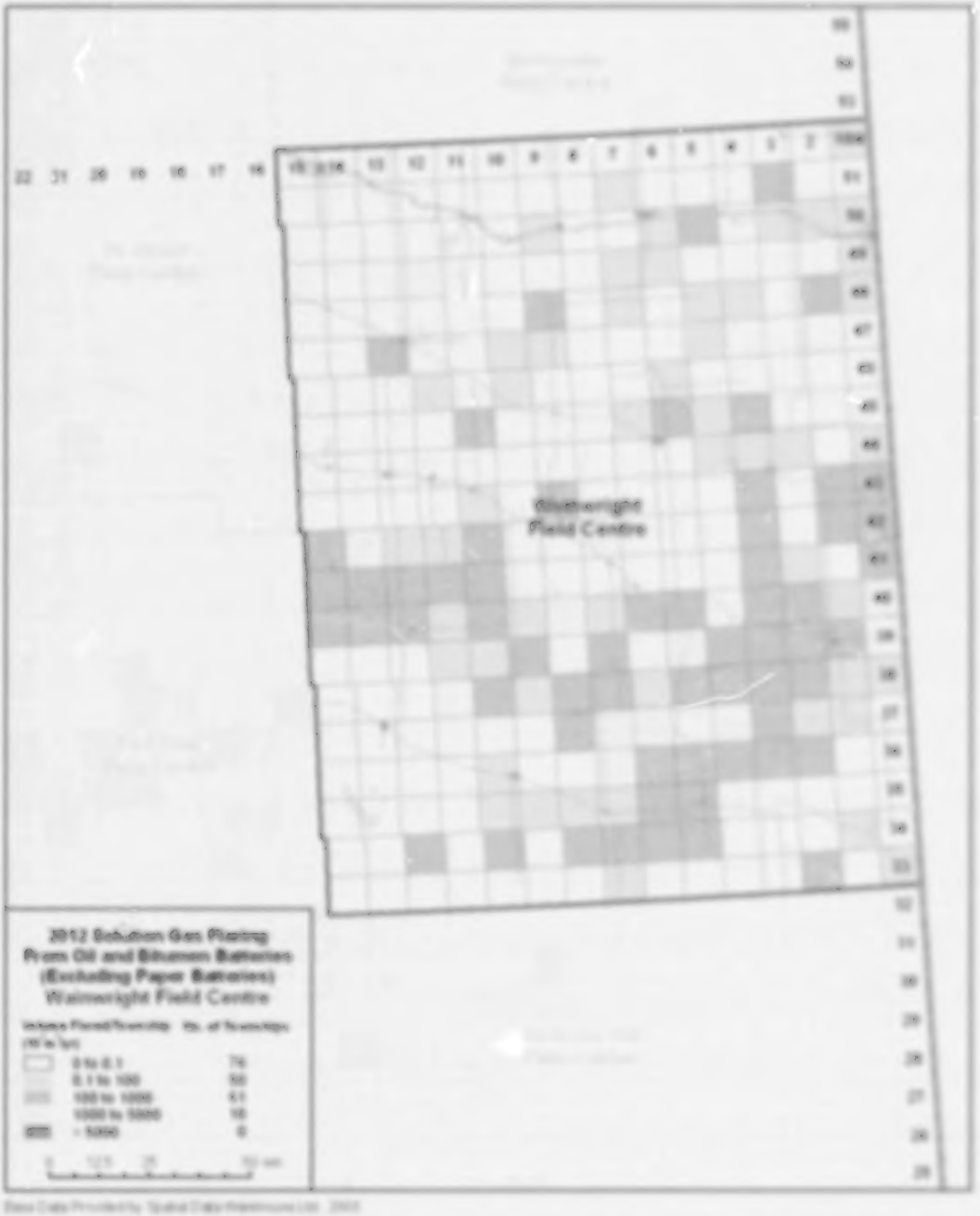

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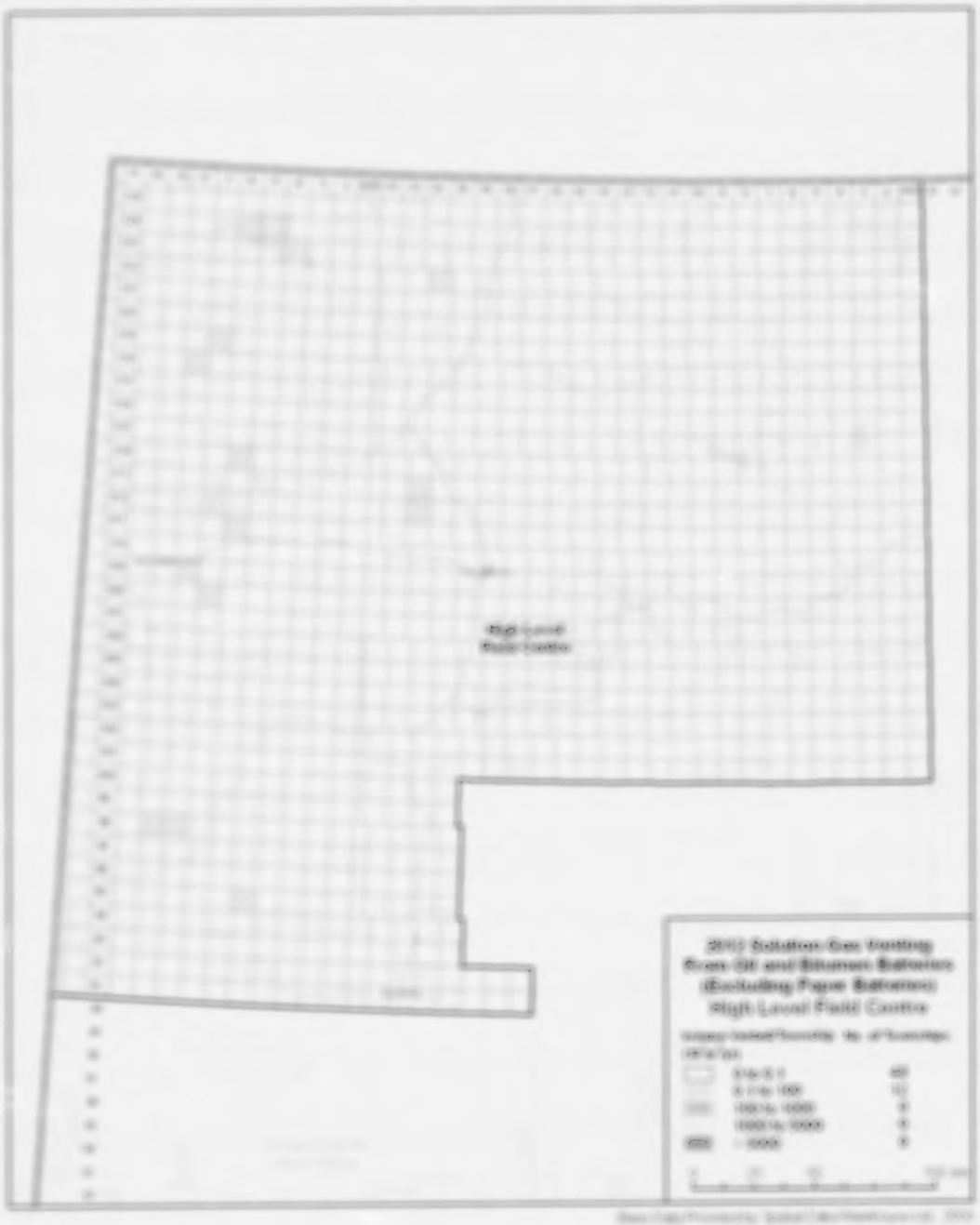

High Level
Field Centre
2012 Solution Gas Venting
from Oil and Bitumen Batteries
(Excluding Flare Batteries)
High Level Field Centre

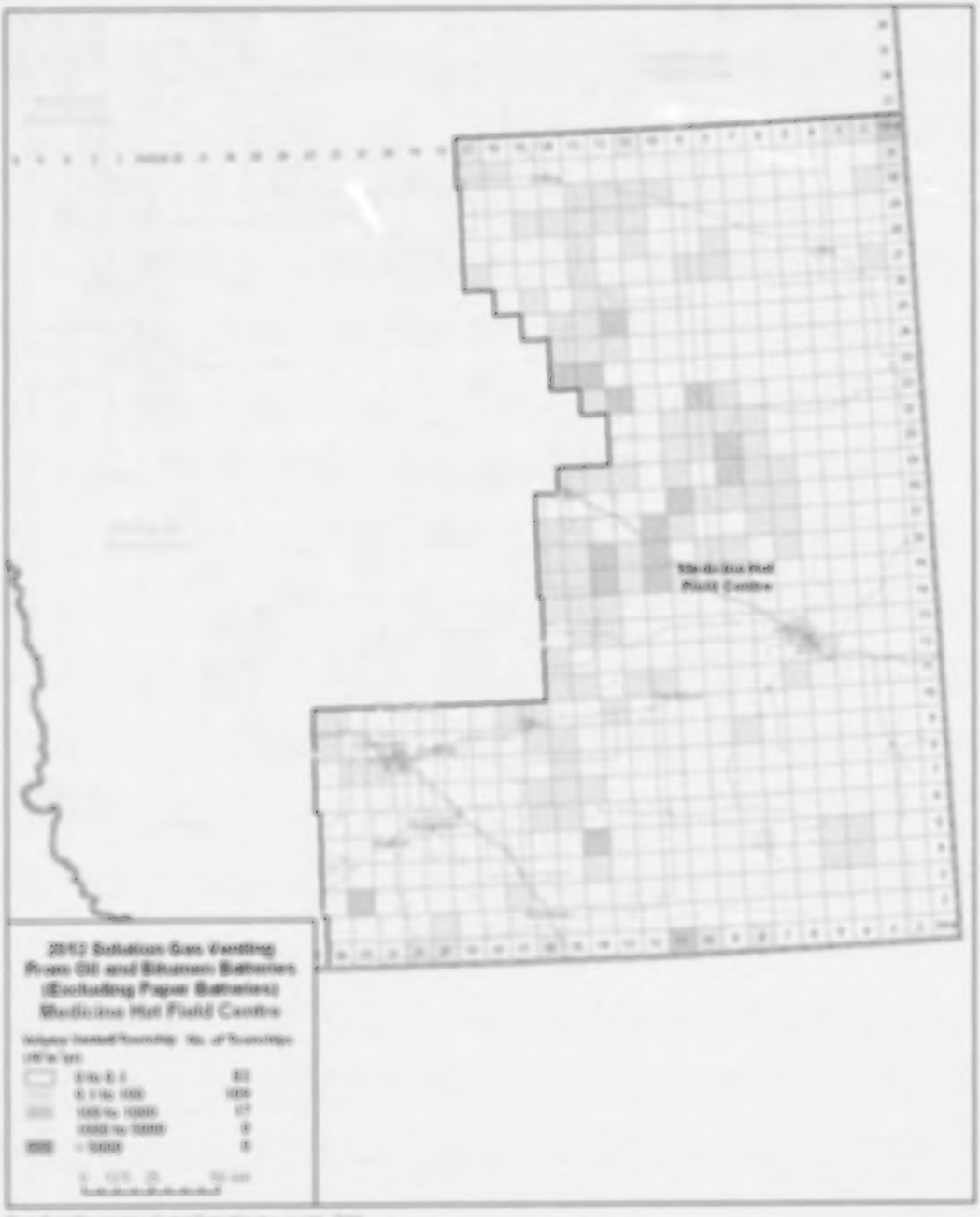
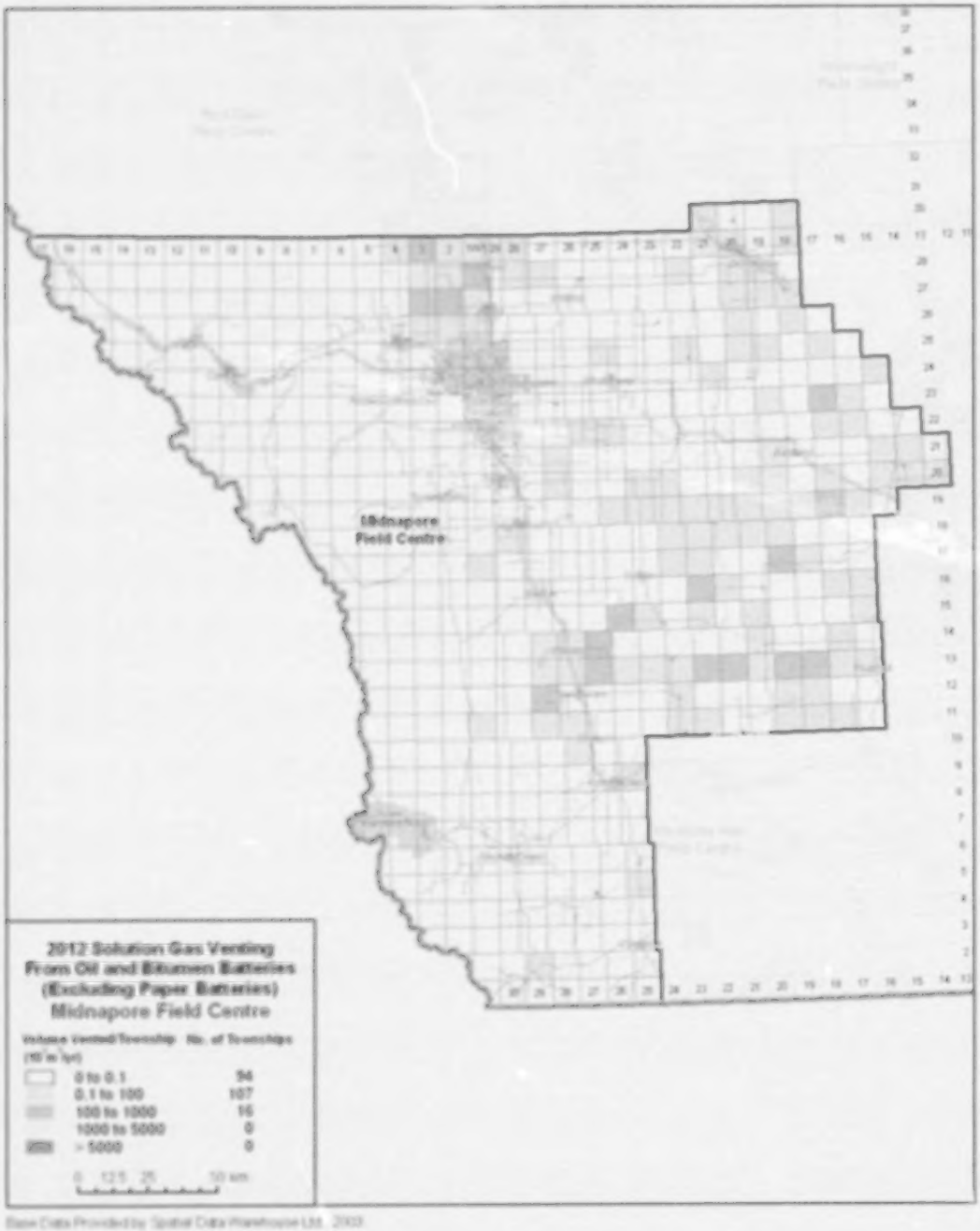


Figure Data Provided by: Spatial Data Warehouse Ltd., 2013



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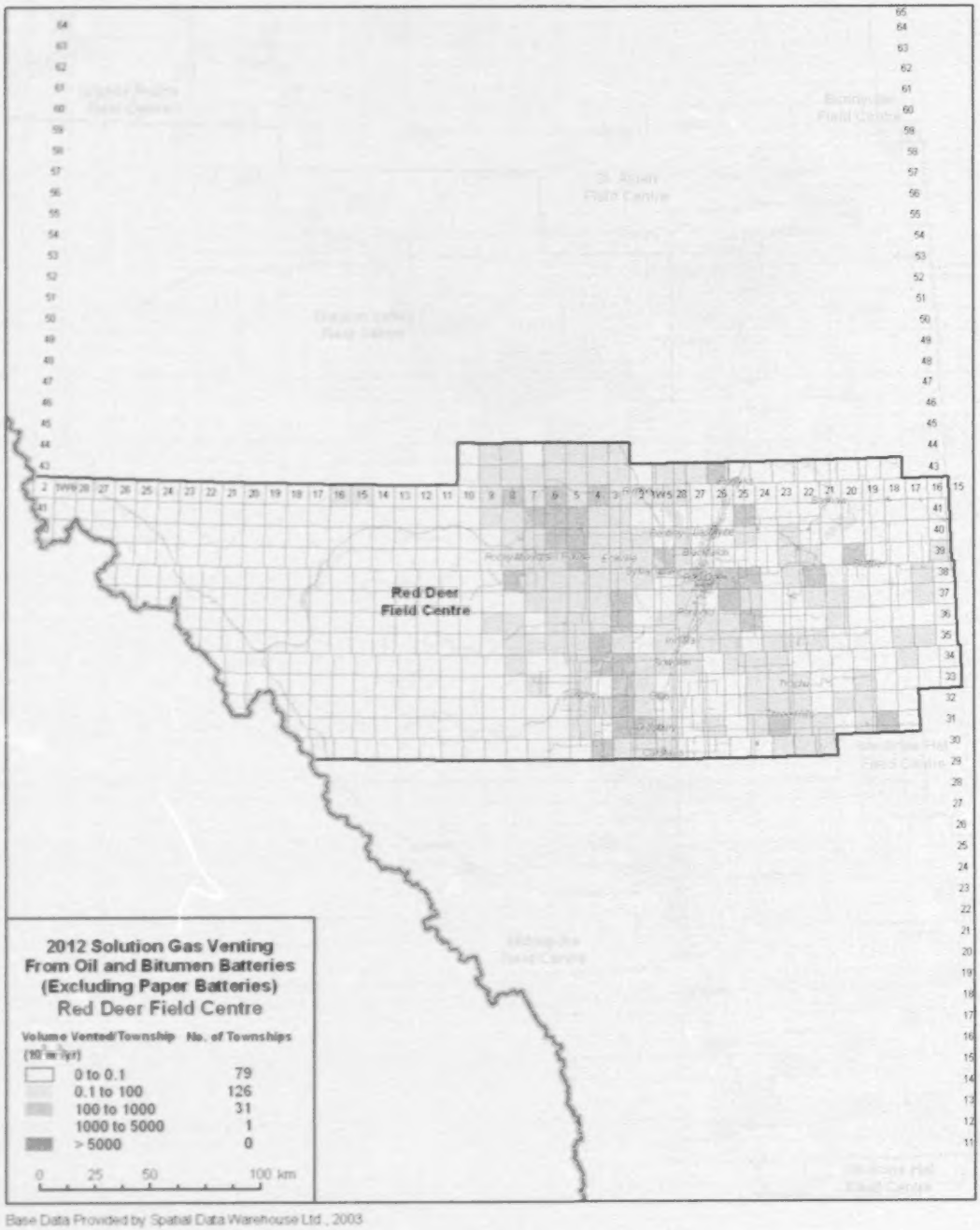
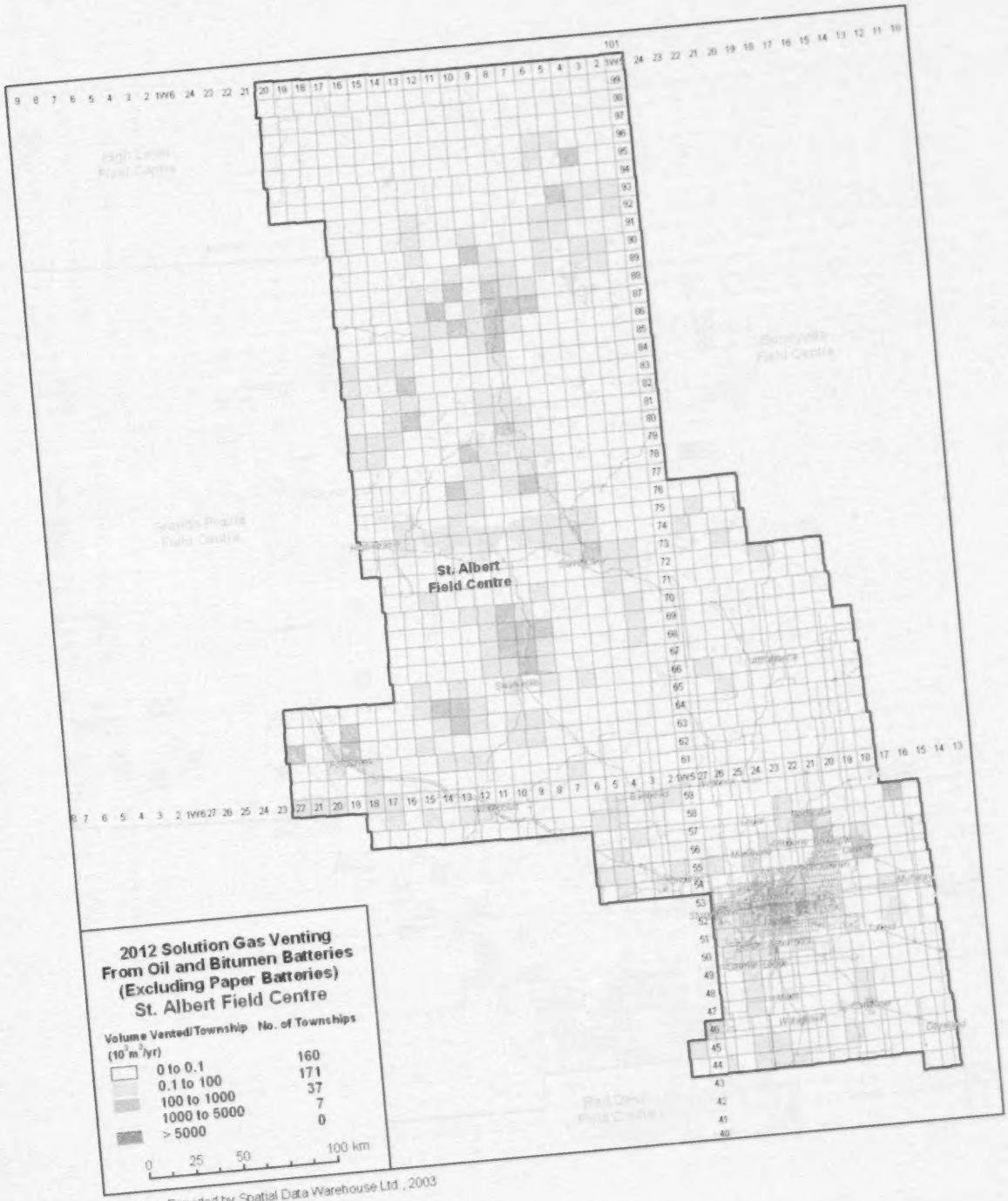


Base Data Provided by Spatial Data Warehouse Ltd., 2003



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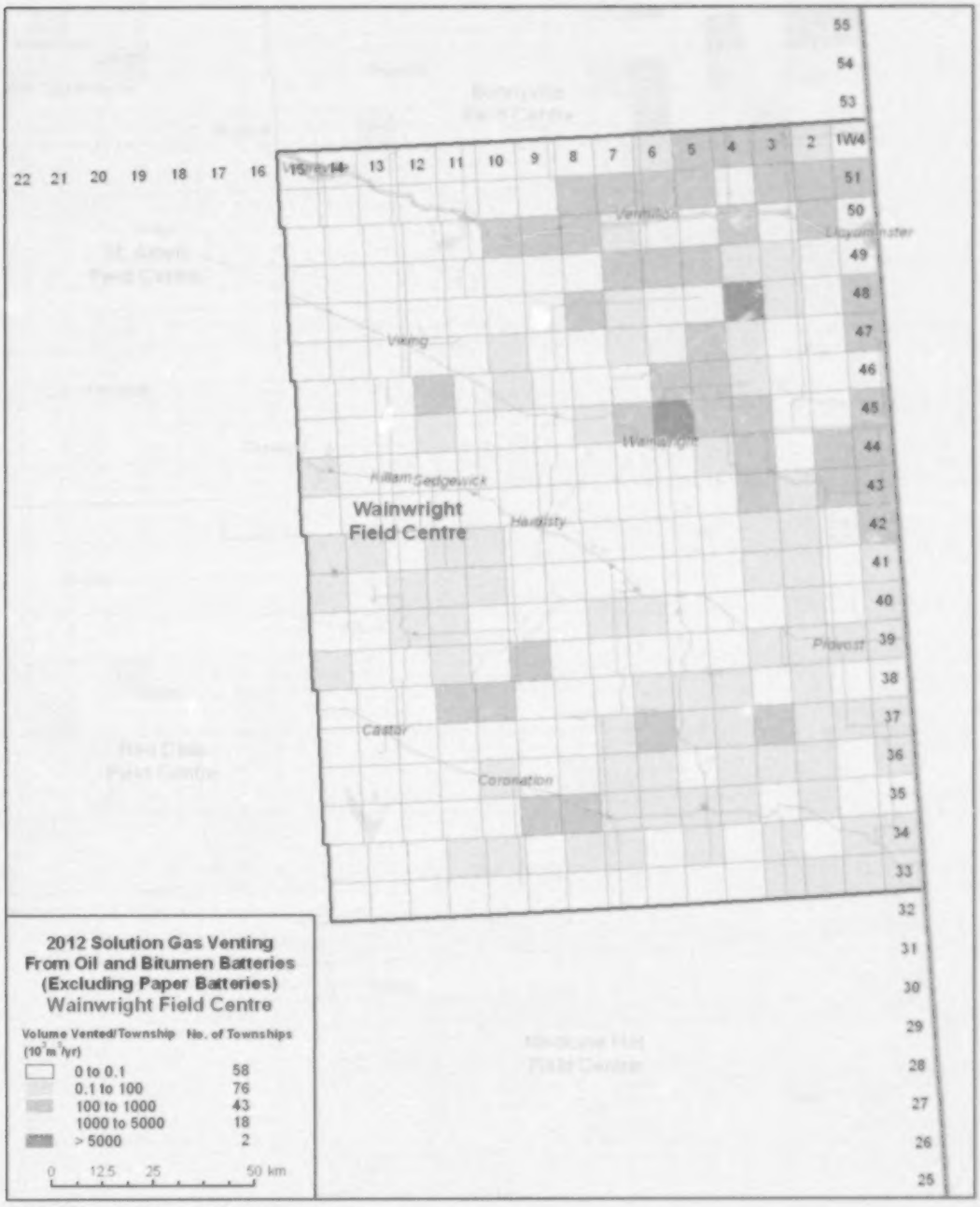

Base Data Provided by: Spatial Data Warehouse Ltd., 2003

7 Solution Gas Emissions Ranking of Operators for 2012

The AER has ranked companies based on volumes from operated crude oil and crude bitumen batteries of (1) flared plus vented solution gas, and (2) vented solution gas. The tables in section 8 provide information on individual companies. The second column in the tables shows the percentage of solution gas conserved by an operator. Individual operators' performance can be compared with the provincial average of 94.2 per cent solution gas conservation.

In this analysis, all crude oil and crude bitumen batteries have been included except for batteries that had an experimental well reporting fluid production in a month. The information on experimental wells remains confidential.

Note that it is possible for an operator to flare or vent a significant volume of solution gas due to the magnitude of the company's operations and still have a high percentage of gas conserved.

Companies are also ranked province-wide and within each AER field centre area. The following describes the fields that appear in the ranking tables:

COMPANY—Name of company operating crude oil and crude bitumen batteries.

GAS CONS—Percentage of solution gas conserved:

(Solution gas produced – Flared gas – Vented gas) / Solution gas produced x 100

GAS CONS CHANGE—Percentage change in gas conservation from the previous year. Blanks represent companies that did not report in 2011 due to mergers, name changes, acquisitions, etc.

GAS FLARED + VENTED (1000 m^3)—Solution gas flared plus vented from operated crude oil and crude bitumen batteries.

GAS FLARED + VENTED RANK—The company's ranking compared with other companies based on the operated volume of solution gas flared plus vented.

GAS FLARED (1000 m^3)—Solution gas flared from operated crude oil and crude bitumen batteries.

FLARE RANK—The company's ranking compared with other companies based on the volume of solution gas flared.

GAS VENTED (1000 m^3)—Solution gas vented from operated crude oil and crude bitumen batteries.

VENT RANK—The company's ranking compared with other companies based on the volume of solution gas vented.

OIL PROD (m^3)—Volume of crude oil and in situ crude bitumen produced from operated crude oil and crude bitumen batteries.

SOLN GAS PROD (1000 m^3)—Volume of solution gas produced from operated crude oil and crude bitumen batteries.

SOLN GAS RANK—The company's ranking compared with other companies based on the volume of solution gas produced.

8 Tables

In the tables that follow, the companies are ranked and listed based on solution gas flared plus vented from their operating facilities in 2012. Each table gives a total at the end for the field centre area covered.

- Operators with the Largest Volumes of Produced Solution Gas in 2012
- Operators with the Largest Volumes of Vented Solution Gas in 2012
- Provincial Ranking of Operators—2012 Conservation Performance
- Field Centre Ranking of Operators—2012 Conservation Performance

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PROVINCIAL RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS CONS CHANGE[2]	GAS FLARED + VENTED (1000 m^3)	GAS FLARED + VENTED RANK	GAS FLARED (1000 m^3)	FLARE RANK	GAS VENTED (1000 m^3)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD (1000 m^3)
Canadian Natural Resources Limited	85.9%	-1.8%	240,905.5	1	15,921.3	7	224,984.2	1	15,442,166.2	1,709,563.5
Husky Oil Operations Limited	95.6%	-1.8%	79,307.4	2	13,229.5	9	66,077.9	2	3,886,803.8	1,804,161.7
Petrobakken Energy Ltd.	72.0%	14.6%	61,485.2	3	60,884.2	1	601.0	34	694,389.8	219,251.6
Penn West Petroleum Ltd.	96.1%	-0.3%	54,454.2	4	44,020.6	2	10,433.6	5	3,179,578.8	1,398,671.7
Devon Canada	93.0%	1.9%	38,687.8	5	12,694.1	12	25,993.7	3	5,908,520.0	551,216.0
Murphy Oil Company Ltd.	68.4%	1.3%	28,013.5	6	28,013.3	3	0.2	264	395,111.2	88,622.1
TriOil Resources Ltd.	39.4%	-45.1%	25,379.5	7	25,379.5	4	0.0	266	105,834.0	41,906.1
Coral Hill Energy Ltd.	51.7%	35.9%	21,057.1	8	21,035.3	5	21.8	189	244,001.0	43,633.2
Harvest Operations Corp.	91.3%	-1.1%	20,518.4	9	15,598.0	8	4,920.4	8	1,272,887.5	236,320.5
Arcan Resources Ltd.	31.5%	-24.9%	18,440.5	10	18,414.6	6	25.9	177	277,868.2	26,903.1
Apache Canada Ltd.	95.3%	-1.3%	17,080.3	11	13,145.2	11	3,935.1	11	723,184.9	364,111.7
Pengrowth Energy Corporation	97.1%	0.3%	15,747.3	12	13,219.2	10	2,528.1	14	1,386,875.5	540,897.7
Twin Butte Energy Ltd.	76.2%	-6.0%	14,472.6	13	922.8	72	13,549.8	4	468,814.0	60,673.4
Bonavista Energy Corporation	96.0%	2.0%	12,628.7	14	4,502.2	31	8,126.5	6	627,706.7	318,801.0
Cenovus FCCL Ltd.	92.5%	-4.0%	11,704.4	15	11,605.1	13	99.3	109	10,380,084.3	155,538.2
Baytex Energy Ltd.	88.2%	-6.6%	11,227.6	16	10,632.4	14	595.2	35	1,397,523.8	95,478.1
ARC Resources Ltd.	97.9%	-0.5%	10,947.2	17	10,172.5	15	774.7	32	1,189,823.2	508,912.6
Crescent Point Energy Corp.	90.4%	-4.8%	9,440.1	18	9,230.9	16	209.2	71	289,179.8	98,269.7
Second Wave Petroleum Inc.	82.6%	8.5%	9,329.4	19	9,202.8	17	126.6	98	148,875.3	53,675.7
Bonterra Energy Corp.	93.0%	-5.6%	9,197.4	20	8,160.5	18	1,036.9	25	234,839.6	130,488.0
Whitecap Resources Inc.	97.4%	3.5%	7,666.5	21	6,608.2	20	1,058.3	24	444,110.6	289,696.0
Gear Energy Ltd.	61.7%	-25.9%	7,574.6	22	78.1	202	7,496.5	7	187,240.6	19,766.9
Cenovus Energy Inc.	97.7%	0.3%	7,005.3	23	2,212.4	50	4,792.9	9	2,787,871.2	297,989.7
Deethree Exploration Ltd.	88.5%	-11.3%	6,898.7	24	6,841.9	19	56.8	143	147,327.5	59,807.2
Sinopec Daylight Energy Ltd.	97.2%	97.2%	6,564.3	25	6,274.0	21	290.3	56	693,781.2	234,024.8
Trilogy Resources Ltd.	97.6%	-0.8%	6,535.7	26	6,247.8	22	287.9	57	603,526.9	268,228.8
Bellatrix Exploration Ltd.	96.8%	1.5%	6,279.9	27	5,730.6	24	549.3	37	187,339.1	193,056.9
Crew Energy Inc.	95.0%	0.2%	6,272.0	28	6,105.4	23	166.6	81	341,055.1	124,830.1
Surge Energy Inc.	96.5%	2.0%	5,953.3	29	4,633.6	28	1,319.7	20	300,871.7	168,889.0
Talisman Energy Inc.	88.2%	6.8%	5,737.1	30	2,558.1	45	3,179.0	12	666,764.8	48,557.3
TORC Oil & Gas Ltd.	49.7%	19.1%	5,671.1	31	5,318.9	26	352.2	50	54,480.4	11,265.3
Charger Energy Corp.	63.4%	41.0%	5,528.8	32	5,519.9	25	8.9	218	25,934.3	15,105.7
NAL Resources Limited	98.7%	0.8%	5,480.7	33	4,563.3	30	917.4	29	427,834.2	415,551.7
TAQA North Ltd.	98.3%	0.0%	5,384.0	34	3,714.3	33	1,669.7	18	390,361.6	323,569.1
Pace Oil & Gas Ltd.	90.5%	0.2%	5,264.6	35	5,040.4	27	224.2	68	310,726.3	55,661.1

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

[2] For the Gas Conservation Change column, a blank cell indicates that a value was not reported for 2011.

PROVINCIAL RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS CONS CHANGE[2]	GAS FLARED + VENTED ($1000 m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000 m^3$)	FLARE RANK	GAS VENTED ($1000 m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000 m^3$)
Equal Energy Ltd.	60.5%	-15.1%	4,784.0	36	4,616.5	29	167.5	80	44,027.5	12,097.0
Shell Canada Energy	97.7%	0.7%	4,586.6	37	2,802.1	43	1,784.5	17	1,403,657.7	201,571.5
Lone Pine Resources Canada Ltd.	84.3%	4.4%	4,580.4	38	295.8	134	4,284.6	10	228,125.7	29,132.9
NuVista Energy Ltd.	83.9%	0.3%	4,539.6	39	2,750.0	44	1,789.6	16	156,326.3	28,213.2
Bearspaw Petroleum Ltd.	64.9%	-9.1%	3,921.9	40	3,921.9	32	0.0	266	70,754.2	11,166.9
Athabasca Oil Corporation	93.0%	-	3,884.3	41	3,645.8	34	238.5	66	31,608.5	55,074.4
Vero Energy Inc.	93.7%	-0.3%	3,564.8	42	3,308.1	36	256.7	64	70,873.8	56,429.1
Manitok Energy Inc.	64.7%	40.8%	3,480.6	43	3,109.5	39	371.1	48	60,540.3	9,865.2
Imperial Oil Resources	99.7%	-0.1%	3,467.6	44	3,112.5	38	355.1	49	9,219,369.0	984,969.3
AvenEx Energy Corp.	49.4%	-1.5%	3,432.1	45	3,223.4	37	208.7	72	49,218.9	6,784.9
Encana Corporation	96.5%	-3.4%	3,341.6	46	3,341.0	35	0.6	260	128,914.2	95,458.2
Exoro Energy Inc.	74.3%	18.4%	3,079.4	47	3,079.4	40	0.0	266	39,547.7	11,966.3
Guide Exploration Ltd.	97.3%	0.2%	3,076.5	48	2,950.6	41	125.9	100	170,421.8	115,517.6
Perpetual Energy Operating Corp.	91.5%	-7.0%	2,958.9	49	88.3	196	2,870.6	13	153,902.9	34,611.2
United Hunter Oil & Gas Corp.	0.0%	0.0%	2,926.4	50	2,926.4	42	0.0	266	1,888.5	2,926.4
Yangarra Resources Corp.	89.1%	-6.3%	2,583.9	51	2,376.6	46	207.3	73	22,042.6	23,725.4
Long Run Exploration Ltd.	97.2%	-	2,576.7	52	1,478.3	59	1,098.4	23	379,384.2	90,441.4
Birchcliff Energy Ltd.	97.7%	-1.5%	2,506.7	53	2,282.2	48	224.5	67	215,201.1	107,972.7
ExxonMobil Canada Ltd. & ExxonMobil Resources Comp.	96.6%	-2.5%	2,459.2	54	2,218.1	49	241.1	65	148,427.7	72,613.6
Vermilion Resources Ltd.	98.2%	0.2%	2,441.2	55	1,584.2	57	857.0	30	502,009.4	132,632.1
Mancal Energy Inc.	90.7%	-6.1%	2,415.4	56	2,369.9	47	55.5	145	142,045.7	25,398.1
Echoex Ltd.	18.2%	10.1%	2,341.3	57	101.2	190	2,240.1	15	34,519.3	2,861.0
Conocophillips Canada Energy Partnership	98.3%	0.6%	2,286.5	58	1,289.3	64	997.2	26	157,954.9	136,777.8
Zargon Oil & Gas Ltd.	89.7%	5.0%	2,213.1	59	2,121.4	51	91.7	112	140,830.2	21,573.7
Arsenal Energy Inc.	88.1%	7.6%	2,099.2	60	1,923.9	52	175.3	79	106,002.3	17,619.0
ConocoPhillips Canada (BRC) Partnership	99.2%	-0.1%	2,091.5	61	1,396.3	62	695.2	33	240,121.4	263,569.5
Pinecrest Energy Inc.	66.1%	11.2%	2,042.6	62	1,198.4	66	844.2	31	181,985.0	6,016.8
Crocotta Energy Inc.	97.4%	-1.8%	1,950.4	63	1,667.7	54	282.7	58	30,646.7	73,672.1
Angle Energy Inc.	98.3%	-0.5%	1,879.0	64	322.0	127	1,557.0	19	107,650.1	108,310.9
Verity Energy Ltd.	55.3%	-43.6%	1,843.3	65	1,843.3	53	0.0	266	5,484.0	4,126.6
Iteration Energy	96.8%	0.6%	1,795.9	66	1,573.9	58	222.0	69	89,990.3	55,343.5
Signalta Resources Limited	82.2%	-3.5%	1,651.1	67	726.4	84	924.7	28	23,386.5	9,294.8
Black Shire Energy Inc.	87.7%	-8.2%	1,631.5	68	1,629.4	55	2.1	249	306,384.3	13,306.1
Goldenkey Oil Inc.	13.9%	-3.6%	1,593.3	69	1,593.3	56	0.0	266	2,136.4	1,851.2
Sure Energy Inc.	90.8%	-2.2%	1,526.5	70	1,373.4	63	153.1	84	31,953.6	16,611.0

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.
[2] For the Gas Conservation Change column, a blank cell indicates that a value was not reported for 2011.

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[illegible]	GAS CONS	GAS CONS CHANGE[1]	GAS FLARED + VENTED (1000 m^3)	GAS FLARED + VENTED RANK	GAS FLARED (1000 m^3)	FLARE RANK	GAS VENTED (1000 m^3)	VENT RANK	OIL PROD (m^3)	GAS-TO-OIL RATIO (1000 m^3)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pipestone Exploration Corp.	92.2%	1.5%	1,480.7	71	1,271.5	68	209.2	45	36,945.9	40,104.0
Five Bank Oil & Gas Ltd.	0.0%	0.0%	1,473.4	72	1,473.4	60	0.0	266	1,178.8	1,473.4
Enablen Oil Corp.	89.0%	-2.4%	1,464.8	73	1,408.8	61	0.0	266	136,238.7	133,913.1
Glencoe Resources Ltd.	85.6%	0.8%	1,417.7	74	80.6	259	1,336.1	31	59,448.8	853,975.3
Changhua Energy Canada Ltd.	94.7%	-	1,384.8	75	1,384.8	62	0.0	266	1,178.8	1,384.8
Enerplus Partnership	96.3%	0.3%	1,381.1	76	762.8	90	618.3	38	748,814.8	1,027,888.2
Connacher Oil And Gas Limited	93.1%	3.4%	1,248.5	77	1,189.0	67	79.5	114	701,127.3	15,674.9
Pelican Oil & Gas Corporation	0.8%	0.1%	1,162.7	78	0.0	266	1,162.7	23	66,239.8	1,396.3
ECO Resources Canada Inc.	48.1%	0.7%	1,147.0	79	855.6	79	291.4	58	53,885.1	65,274.3
Journey Energy Inc.	98.3%	-	1,113.8	80	1,061.1	64	852.7	27	112,884.8	97,439.4
Celtic Exploration Ltd.	92.3%	-	1,064.8	81	1,038.3	70	26.6	178	97,374.8	14,716.8
Cutpick Energy Inc.	97.1%	3.6%	1,062.6	82	1,062.6	65	0.1	265	95,261.3	95,048.8
Tamarack Valley Energy Ltd.	85.8%	16.2%	1,060.5	83	1,026.0	71	34.5	131	31,278.8	25,381.2
Longview Oil Corp.	49.9%	0.3%	1,053.0	84	481.4	103	521.6	34	102,736.4	72,271.1
Perpetual Resource Corp.	45.1%	3.1%	998.3	85	812.8	83	73.5	126	8,178.8	1,818.8
ConocoPhillips Western Canada Partnership	96.9%	2.3%	976.7	86	937.8	74	37.7	166	21,712.8	188,716.8
Compton Petroleum Corporation	95.7%	0.4%	954.1	87	910.4	85	413.7	48	68,977.8	24,026.8
Warfield Resources Ltd.	79.9%	3.7%	952.7	88	676.1	74	72.6	126	16,512.8	4,032.8
Spartan Oil Corp.	97.4%	1.8%	951.8	89	902.3	87	345.3	53	136,798.8	34,548.8
Sonde Resources Corp.	94.4%	-0.8%	897.3	90	754.8	91	142.5	98	10,458.8	16,126.1
Response Energy Corporation	96.2%	1.2%	874.8	91	846.1	77	278.7	67	8,018.8	2,278.8
Shoreline Energy Corp.	93.8%	-13.8%	858.0	92	788.8	77	70.2	126	8,884.8	5,702.8
Contour Energy Ltd.	62.9%	-10.5%	798.8	93	412.8	114	384.0	47	8,482.8	2,147.8
Storm Resources Ltd.	97.2%	-	786.4	94	724.8	89	71.8	126	62,742.7	28,758.8
Venetus Resources Ltd.	97.0%	36.4%	783.8	95	748.8	93	48.3	151	8,488.8	2,718.8
Omers Energy Inc.	96.1%	0.9%	782.8	96	782.8	79	0.0	266	60,218.8	47,398.8
Bellamont Exploration Ltd.	91.7%	0.8%	779.8	97	703.8	92	26.0	175	11,598.8	8,438.8
Expand Energy Corporation	0.0%	0.0%	774.8	98	774.8	78	0.0	266	2,118.8	774.8
NEP Canada ULC	97.7%	-1.1%	764.2	99	581.2	94	183.0	78	105,738.8	20,891.8
Hemisphere Energy Corporation	48.5%	43.5%	751.8	100	665.1	88	86.8	108	20,248.8	1,198.8
K Exploration Inc.	97.9%	8.1%	748.8	101	703.8	97	45.1	172	8,888.8	6,888.8
Rife Resources Ltd.	97.5%	1.4%	738.1	102	618.5	112	308.6	54	85,248.8	28,188.8
Connaught Oil & Gas Ltd.	0.0%	0.0%	718.7	103	718.7	80	0.0	266	3,482.8	798.8
Kenwell of Canada, Limited	69.9%	-21.9%	715.3	104	663.1	90	52.2	147	8,648.8	2,048.8
Legacy Oil + Gas Inc.	98.4%	2.7%	698.1	105	564.8	95	114.3	104	108,038.8	68,884.1

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PROVINCIAL RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS CONS CHANGE[2]	GAS FLARED + VENTED (1000 m^3)	GAS FLARED + VENTED RANK	GAS FLARED (1000 m^3)	FLARE RANK	GAS VENTED (1000 m^3)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD (1000 m^3)
Chevron Canada Limited	76.4%	-	215.5	671	215.2	148	0.3	263	1,890.7	892.4
Progress Energy Ltd.	99.4%	1.0%	208.6	672	150.3	168	58.3	140	34,268.2	32,303.1
Bowood Energy Ltd.	97.0%	-2.0%	197.6	673	123.8	181	73.8	124	10,512.7	6,675.9
Maelstrom Energy Ltd.	70.1%	-23.8%	196.9	674	189.0	153	7.9	219	2,269.3	825.3
Premier Petroleum Corp.	0.0%	0.0%	196.2	675	196.2	149	0.0	266	1,248.3	196.2
Shackleton Energy Ltd.	92.6%	-5.9%	195.1	676	84.0	190	111.1	107	6,239.3	289.4
Tallgrass Energy Corp.	88.2%	8.7%	194.2	677	171.8	157	22.4	187	10,783.8	1,647.6
Seven Generations Energy Ltd.	95.4%	-0.5%	194.2	677	194.2	150	0.0	266	1,729.1	5,459.4
Tamco Energy Inc.	93.6%	0.7%	191.0	679	182.5	163	30.5	167	10,436.0	2,963.8
Cona Energy Limited	90.5%	-13.5%	189.3	679	40.2	235	149.1	85	5,953.3	274.0
Obsidian Energy Inc.	96.3%	4.6%	187.0	680	187.0	154	0.0	266	20,626.9	11,095.5
Cardinal Energy Ltd.	94.8%	-	181.4	681	117.8	184	63.6	133	7,022.9	279.4
Perella Resources Inc.	51.9%	51.9%	179.3	682	168.8	160	11.5	213	7,543.4	370.9
STEP Resources Ltd.	28.5%	0.4%	177.1	683	169.3	159	7.8	220	902.6	247.8
Alberta Petroleum Energy Limited	7.4%	5.6%	176.7	684	123.6	182	53.1	149	3,735.3	169.7
Ravenwood Energy Corp.	99.7%	0.4%	174.2	685	97.0	192	77.2	122	43,106.7	52,970.6
Keyera Energy Ltd.	85.2%	-9.8%	173.6	686	173.6	156	0.0	266	5,180.5	1,176.2
Direct Energy Marketing Limited	99.5%	0.1%	172.6	687	158.0	165	14.6	207	37,195.7	34,065.3
Tourmaline Oil Corp.	0.0%	0.0%	171.4	688	171.4	158	0.0	266	452.0	171.4
Path Resources Ltd.	54.5%	26.3%	169.5	689	169.2	162	0.3	262	1,999.9	360.1
Clearbrook Resources Inc.	86.8%	-8.0%	162.4	690	162.4	161	0.0	266	5,320.3	489.7
Avalon Exploration Ltd.	0.0%	0.0%	159.2	691	0.0	264	159.2	82	10,225.6	119.7
Alexander Oilfield Services Ltd.	72.4%	4.2%	153.4	692	153.4	167	0.0	266	1,236.4	555.8
Bumper Development Corporation Ltd.	99.0%	0.4%	148.3	693	69.9	215	78.4	117	5,083.9	7,355.2
Ascension Canada Energy Services Ltd.	99.6%	0.1%	144.2	694	0.0	264	144.2	86	3,938.5	38,327.4
Terra Energy Corp.	93.5%	-5.3%	143.8	695	127.5	177	16.3	200	10,819.7	2,353.5
Delphi Energy Corp.	99.6%	0.1%	143.2	696	0.0	264	143.2	87	47,701.0	33,067.3
Chunlin Energy Corp.	77.6%	9.1%	142.4	697	0.0	264	142.4	90	6,902.1	634.2
Silverleaf Energy Ltd.	74.3%	20.1%	141.4	698	126.0	180	15.4	205	1,445.6	540.9
Western Plains Petroleum Ltd.	0.0%	0.0%	139.9	699	124.6	262	126.2	99	4,922.6	139.8
Sunset Energy Resources Partnership	99.0%	-	138.2	700	138.2	170	0.0	266	67,649.3	33,111.9
Southern Exploration Ltd.	99.4%	-	135.3	701	135.3	171	0.0	266	2,533.1	1,270.2
Wolfata Oil & Gas Limited	92.1%	9.1%	134.7	702	0.0	264	134.7	93	1,494.1	199.3
Sedna Oil And Gas Ltd.	28.8%	24.9%	133.5	703	133.5	173	0.0	266	619.6	167.6
Zargon Oil (2000) Inc.	0.0%	0.0%	131.7	704	131.7	175	0.0	266	333.8	131.7

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PROVINCIAL RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS CONS CHANGE[2]	GAS FLARED + VENTED ($1000 m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000 m^3$)	FLARE RANK	GAS VENTED ($1000 m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000 m^3$)
Kootenay Energy Inc.	39.8%	-33.7%	128.4	**205**	128.4	176	0.0	266	6,986.5	213.1
Ener T Corporation	8.1%	8.1%	128.0	**206**	0.0	294	128.0	95	3,001.3	139.2
Kasten Energy Inc.	53.7%	53.7%	127.0	**207**	0.0	294	127.0	97	2,376.5	274.3
Questfire Energy Corp.	0.0%	0.0%	126.7	**208**	126.7	178	0.0	266	106.3	126.7
NEO Exploration Inc.	63.7%	12.2%	126.3	**209**	76.2	207	50.1	150	3,730.6	348.3
Magnum Energy Inc.	87.2%	7.3%	124.9	**210**	105.2	189	19.7	196	5,197.2	973.8
White Ram Resources Ltd.	34.8%	-26.5%	124.8	**211**	0.0	294	124.8	101	631.7	191.5
Zeal Energy Inc.	68.9%	-31.1%	123.0	**212**	0.0	294	123.0	102	2,778.1	395.3
Rustum Petroleums Limited	0.0%	0.0%	119.9	**213**	100.0	191	19.9	195	3,245.9	119.9
Scollard Energy Inc.	99.7%	1.0%	118.2	**214**	61.7	216	56.5	144	22,227.7	34,624.8
Vesta Energy Ltd.	98.8%	-1.2%	118.0	**215**	118.0	183	0.0	266	4,013.8	9,542.6
Rimfire Energy Inc.	94.1%	-5.9%	116.4	**216**	116.4	185	0.0	266	2,005.7	1,964.5
Fogo Energy Corp.	25.2%	17.3%	116.2	**217**	116.2	186	0.0	266	1,620.9	155.3
Stout Energy Inc.	0.0%	0.0%	113.1	**218**	0.0	294	113.1	105	787.6	113.1
Tower Ridge Enterprises Corp.	17.9%	-	111.2	**219**	0.0	294	111.2	106	379.5	135.5
Dewpoint Resources Ltd.	0.0%	0.0%	109.0	**220**	109.0	187	0.0	266	710.5	109.0
Cowboy Exploration Ltd.	0.0%	0.0%	108.6	**221**	108.6	188	0.0	266	76.3	108.6
Cougar Oil And Gas Canada Inc.	0.0%	0.0%	104.6	**222**	23.7	254	80.9	115	2,107.8	104.6
Summerland Energy Inc.	97.1%	0.1%	101.1	**223**	93.7	194	7.4	223	9,489.7	3,500.8
Garnet Resources Ltd.	90.5%	-3.7%	97.3	**224**	73.0	211	24.3	181	1,562.4	1,021.0
Derrick Petroleum Ltd.	80.8%	-5.7%	93.9	**225**	0.0	294	93.9	110	1,380.1	489.5
Predator Oil Ltd.	93.0%	-	93.3	**226**	73.9	208	19.4	197	6,175.4	1,327.8
Croverro Energy Ltd.	0.0%	0.0%	92.6	**227**	0.0	294	92.6	111	3,604.2	92.6
Coda Petroleum Inc.	0.0%	0.0%	92.3	**228**	92.3	195	0.0	266	207.6	92.3
Joli Fou Petroleums Ltd.	18.2%	-9.1%	92.0	**229**	77.8	204	14.2	208	1,660.7	112.5
Ridal Resource Ltd.	0.0%	0.0%	91.7	**230**	0.0	294	91.7	112	1,844.9	91.7
Stonewater Resources Inc.	0.0%	0.0%	85.7	**231**	85.7	197	0.0	266	338.7	85.7
Seistech Energy Inc.	17.6%	-	85.5	**232**	85.5	198	0.0	266	342.3	103.8
Windtalker Energy Corp.	92.8%	92.8%	84.6	**233**	0.0	294	84.6	113	66,398.1	1,176.4
Dark Energy Ltd.	71.2%	5.3%	81.1	**234**	0.0	294	81.1	114	6,042.0	281.9
Indra Oil & Gas Ltd.	0.0%	0.0%	79.2	**235**	57.9	217	21.3	190	1,260.3	79.2
Standard Exploration Ltd.	34.7%	-6.8%	78.8	**236**	78.8	201	0.0	266	4,278.1	120.6
Shanpet Resources Ltd.	77.3%	3.3%	78.4	**237**	0.0	294	78.4	120	1,735.0	345.9
Blackhawk Resource Operating Corp.	37.2%	0.4%	77.9	**238**	77.9	203	0.0	266	2,669.0	124.0
Redwater Energy Corp.	87.6%	19.9%	77.0	**239**	76.9	205	0.1	265	3,549.3	621.4

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PROVINCIAL RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS CONS CHANGE[2]	GAS FLARED + VENTED (1000 m^3)	GAS FLARED + VENTED RANK	GAS FLARED (1000 m^3)	FLARE RANK	GAS VENTED (1000 m^3)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD (1000 m^3)
Navarone Energy Corporation	85.5%	-10.4%	76.3	**240**	76.3	206	0.0	266	1,064.2	524.6
New North Resources Ltd.	89.9%	-1.5%	74.7	**241**	0.0	294	74.7	123	2,130.6	737.3
Owl River Resources Ltd.	93.7%	0.3%	74.5	**242**	72.7	212	1.8	251	1,076.5	1,176.5
MKE Canada Ltd.	67.6%	-4.7%	74.3	**243**	73.2	210	1.1	256	5,062.6	229.1
Lockwood Resources Ltd.	74.5%	-25.1%	73.4	**244**	73.4	209	0.0	266	1,582.3	288.3
Sanford Petroleum Ltd.	0.0%	0.0%	72.6	**245**	10.1	264	62.5	135	2,801.0	72.6
Sword Energy Corp.	70.0%	-	72.3	**246**	0.0	294	72.3	127	4,947.7	240.9
Sphere Energy Corp.	59.3%	15.5%	72.0	**247**	10.1	264	61.9	136	3,131.4	177.0
Crazy Hill Resources Ltd.	0.0%	0.0%	71.7	**248**	0.0	294	71.7	129	521.8	71.7
BLZ Energy Ltd.	0.0%	0.0%	71.1	**249**	71.1	213	0.0	266	296.5	71.1
Regco Petroleums Ltd.	3.3%	-13.0%	71.1	**249**	71.1	213	0.0	266	1,447.0	73.5
Concerto Resources Ltd.	44.6%	4.5%	70.1	**250**	57.5	218	12.6	212	427.5	126.5
Marquee Energy Ltd.	99.9%	2.9%	67.7	**251**	51.5	223	16.2	201	62,696.9	77,969.5
Regent Resources Ltd.	96.4%	-1.6%	65.3	**252**	33.0	238	32.3	166	5,254.7	1,789.9
Firenze Energy Ltd.	95.2%	-4.4%	63.0	**253**	0.0	294	63.0	134	12,659.9	1,309.1
Cangild Resources Ltd.	0.0%	0.0%	61.6	**254**	0.0	294	61.6	137	248.8	61.6
Jaco Energy Limited	93.3%	0.4%	61.5	**255**	55.0	220	6.5	226	5,160.4	922.5
Ribbon Creek Resources Inc.	98.8%	4.1%	56.8	**256**	28.5	245	28.3	172	4,299.7	4,547.0
Canrock Energy Corp.	98.4%	-	55.7	**257**	55.7	219	0.0	266	7,756.4	3,368.2
Trafina Energy Ltd.	74.7%	33.0%	54.9	**258**	50.8	224	4.1	235	1,890.8	216.9
611890 Alberta Inc.	0.0%	0.0%	54.7	**259**	0.0	294	54.7	146	7,123.5	54.7
Waldron Energy Corporation	99.4%	-0.1%	54.6	**260**	26.0	248	28.6	171	10,138.6	8,557.8
Invicta Energy Corp.	86.4%	-1.4%	53.1	**261**	24.2	251	28.9	169	598.4	389.0
Onstad Energy Corp.	38.4%	-61.6%	52.3	**262**	52.3	222	0.0	266	1,495.5	84.9
Mato Inc.	96.1%	0.5%	51.9	**263**	0.0	294	51.9	148	629.3	1,329.9
Cumberland Oil & Gas Ltd.	28.6%	8.8%	50.2	**264**	50.1	226	0.1	265	2,381.9	70.3
Wilcox Energy Corp.	48.8%	48.8%	49.4	**265**	11.3	263	38.1	161	1,193.2	96.4
Polar Star Canadian Oil And Gas, Inc.	99.3%	2.1%	49.3	**266**	49.3	228	0.0	266	28,872.3	7,147.6
Birchill Exploration Corp.	0.0%	0.0%	48.1	**267**	48.1	229	0.0	266	140.2	48.1
Newalta Corporation	0.0%	0.0%	47.9	**268**	47.9	230	0.0	266	768.9	47.9
RON Resources Ltd.	86.7%	86.7%	47.2	**269**	47.2	231	0.0	266	521.4	354.2
Goodland Energy Ltd.	71.3%	-1.8%	47.1	**270**	0.0	294	47.1	153	2,012.6	163.9
Golden Spike Energy Inc.	28.7%	8.7%	44.8	**271**	0.0	294	44.8	154	420.1	62.8
South Ridge Management Ltd.	0.0%	0.0%	43.5	**272**	43.5	232	0.0	266	275.6	43.5
Corex Resources Ltd.	98.1%	-1.1%	43.5	**273**	43.5	232	0.0	266	4,750.7	2,311.9

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PROVINCIAL RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS CONS CHANGE[2]	GAS FLARED + VENTED (1000 m³)	GAS FLARED + VENTED RANK	GAS FLARED (1000 m³)	FLARE RANK	GAS VENTED (1000 m³)	VENT RANK	OIL PROD (m³)	SOL'N GAS PROD (1000 m³)
Beaver Lake Resources Corporation	0.0%	0.0%	43.2	274	43.2	233	0.0	266	510.2	43.2
Wild Stream Exploration Inc.	97.9%	0.1%	42.5	275	0.0	294	42.5	155	4,514.7	1,990.1
Sojourn Energy Inc.	12.5%	-48.0%	41.9	276	0.0	294	41.9	156	1,870.0	47.9
Fort Calgary Resources Ltd.	86.8%	76.7%	41.1	277	41.1	234	0.0	266	9,023.6	312.4
Spur Resources Ltd.	98.2%	98.2%	40.7	278	0.0	294	40.7	157	1,575.6	2,294.1
Gold Ridge Investments Corporation	0.0%	0.0%	40.5	279	0.0	294	40.5	158	126.4	40.5
Dolomite Energy Inc.	48.1%	48.1%	40.0	280	39.8	236	0.2	264	11,808.7	77.0
Artek Exploration Ltd.	99.1%	10.0%	38.5	281	0.0	294	38.5	160	12,736.0	4,197.5
Brahma Resources Ltd.	0.0%	0.0%	37.9	282	24.1	222	13.8	210	1,443.5	37.9
Statoil Canada Ltd.	99.0%	-0.2%	37.0	283	37.0	237	0.0	266	950,397.0	3,717.3
Pavilion Energy Corp.	76.5%	-7.2%	36.5	284	0.0	294	36.5	163	12,924.0	155.2
Quatro Resources Inc.	99.3%	0.2%	35.3	285	0.0	294	35.3	164	4,134.3	4,707.6
Tykewest Limited	89.4%	5.0%	33.4	286	0.0	294	33.4	165	3,387.1	316.0
TimberRock Energy Corp.	80.5%	67.8%	33.0	287	30.9	241	2.1	249	644.2	168.8
Surat Energy Inc.	0.0%	0.0%	32.7	288	28.7	244	4.0	236	992.5	32.7
Suncor Energy Oil and Gas Partnership	99.8%	0.5%	32.3	289	31.3	240	1.0	257	44,457.3	13,842.7
Bay Trail Resources Ltd.	44.0%	7.9%	31.8	290	31.8	239	0.0	266	109.5	56.8
Wrangler West Energy Corp.	99.4%	-0.5%	30.9	291	28.1	246	2.8	243	6,613.5	5,104.5
Barcomp Petroleum Ltd.	0.0%	0.0%	29.6	292	0.0	294	29.6	168	6,720.1	29.6
Primrose Drilling Ventures Ltd.	0.0%	0.0%	28.9	293	0.0	294	28.9	169	594.7	28.9
Copper Island Resources Ltd.	99.3%	-	28.9	293	9.0	266	19.9	195	7,836.0	4,119.3
Radius Resources Corp.	0.0%	0.0%	28.8	294	28.8	243	0.0	266	422.5	28.8
Capio Exploration Ltd.	99.8%	-0.1%	27.4	295	0.0	294	27.4	174	30,143.3	13,490.6
Alston Energy Inc.	99.0%	-	27.2	296	27.2	247	0.0	266	7,072.4	2,629.5
Eclipse Resources Ltd.	99.6%	0.1%	26.1	297	2.0	266	24.1	183	8,872.6	6,182.0
Silver Blaze Energy Ltd.	84.2%	-15.8%	26.0	298	0.0	294	26.0	176	457.1	164.5
945279 Alberta Limited	0.0%	0.0%	25.6	299	0.0	294	25.6	178	211.9	25.6
1471002 Alberta Ltd.	28.8%	28.8%	25.2	300	25.2	250	0.0	266	116.3	35.4
Avatar Energy Ltd.	89.1%	-1.2%	25.1	301	0.0	294	25.1	179	522.9	231.2
Border Petroleum Corp.	0.0%	0.0%	24.6	302	0.0	294	24.6	180	2,416.4	24.6
Petroglobe Inc.	67.0%	-22.2%	24.6	302	8.7	268	15.9	202	679.8	74.5
Solara Exploration Ltd.	99.7%	0.4%	24.2	303	0.0	294	24.2	182	10,129.9	6,965.8
Barrier Reef Resources Ltd.	0.0%	0.0%	24.0	304	24.0	253	0.0	266	560.6	24.0
Jayhawk Resources Ltd.	57.8%	57.8%	24.0	304	24.0	253	0.0	266	189.8	56.8
Marquee Petroleum Ltd.	81.6%	-6.5%	23.7	306	23.7	254	0.0	266	492.1	129.0

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.
[2] For the Gas Conservation Change column, a blank cell indicates that a value was not reported for 2011.

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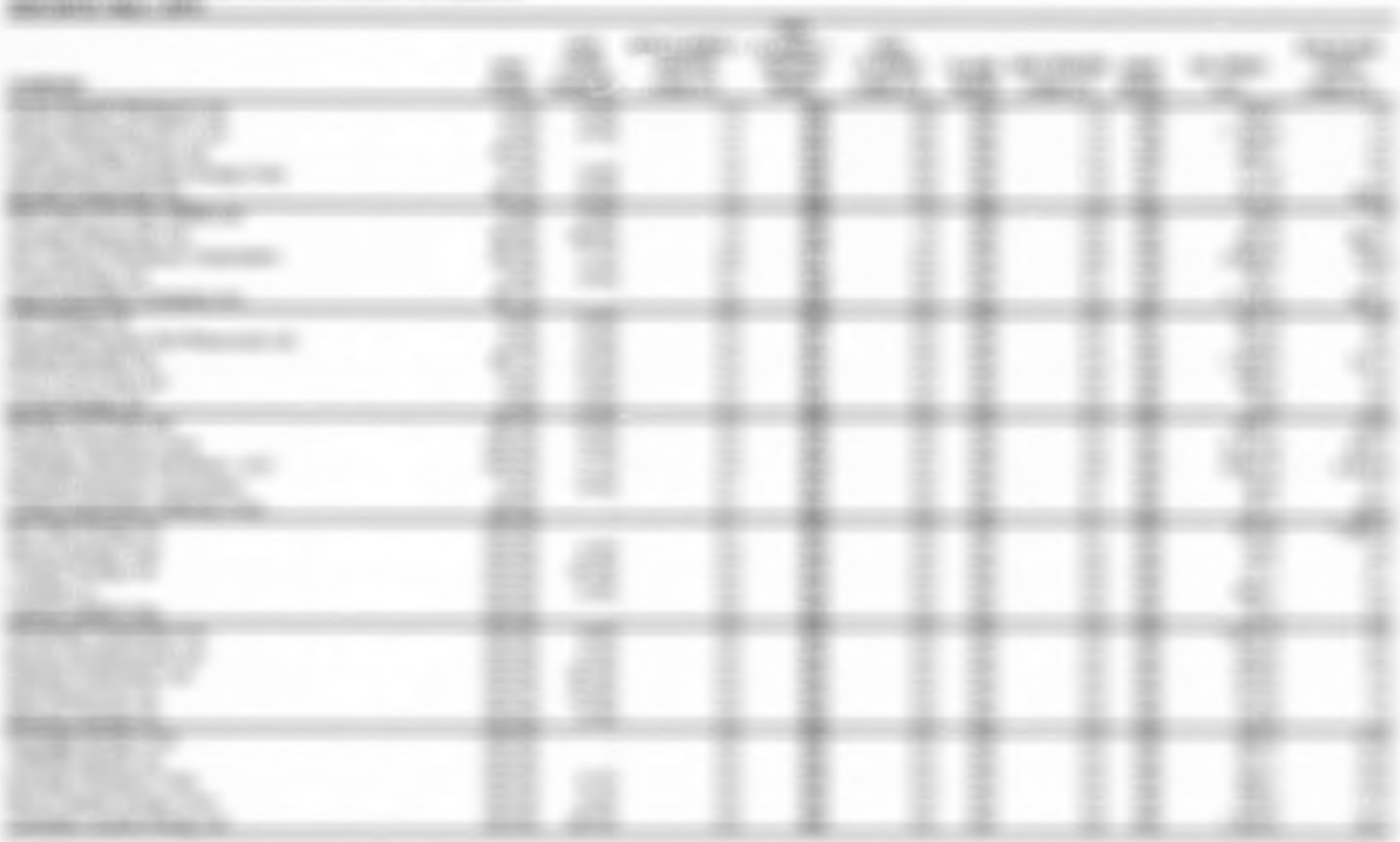

[illegible] OF OPTION TO VENT - 2012 FLARED + VENTED VOLUME[1]
CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
DATA DATE: May 1, 2012

COMPANY	GAS EVENT	GAS EVENT CHANGE[2]	GAS FLARED + VENTED (1000 m^3)	GAS FLARED + VENTED RANK	GAS FLARED (1000 m^3)	FLARE RANK	GAS VENTED (1000 m^3)	VENT RANK	OIL PROD (m^3)	SOLN GAS PROD (1000 m^3)
[illegible]	100.0%	-	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	932.4	30.2
Calfax Resources Ltd.	100.0%	-	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	437.4	36.3
Halo Buyers Inc.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	359.3	54.5
Tourmalin Extreme General Partner Ltd.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	607.3	71.8
Four Winds Energy Services Ltd.	100.0%	-	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	2,214.3	75.6
Sterling Eagle Oil Corporation	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	1,041.8	91.0
BNP Resources Inc.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	696.6	93.1
Ember Resources Inc.	100.0%	-	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	2,237.1	93.8
International Frontier Resources Corporation	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	2,835.6	99.1
Athena Exploration Inc.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	165.4	104.5
Gateway Petroleum Inc.	100.0%	-	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	1,047.9	108.2
Avalon Energy Ltd.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	1,051.7	147.8
Avalon Energy Inc.	100.0%	100.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	430.5	152.6
Northern Spirit Resources Inc.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	443.7	164.2
Summerfield Energy Inc.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	5,299.2	247.2
Edge Resources Inc.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	247.9	273.2
Silver Bay Resources Ltd.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	1,212.9	287.7
Wolter Petroleum Ltd.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	368.6	318.3
Ruger Energy Inc.	100.0%	-	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	808.4	336.6
Iconhorse Oil & Gas Inc.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	770.6	351.2
1366101 Alberta Ltd.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	2,649.7	365.7
Condor Canada Petroleum Inc.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	1,333.0	367.8
WLR Investment Ltd.	100.0%	-	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	133.1	393.1
MEGL Corp.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	6,361.8	439.2
Teague Exploration Inc.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	1,910.0	467.2
Fairplank Resources Ltd.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	746.6	541.4
NAL Energy Ltd.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	269.8	579.2
ConocoPhillips Canada Operations Ltd.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	102.2	636.3
Canyon Oil & Gas Corporation	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	865.9	745.7
Zire Energy Ltd.	100.0%	-	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	96.2	791.3
Wiley Resources Ltd.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	1,372.9	829.3
Tidewater Oil & Gas Limited	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	1,095.8	831.6
Shapow Resources Ltd.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	205.9	846.1
Bashall Exploration Limited Partnership	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	716.1	963.0
Centennial Petroleum Company Ltd.	100.0%	0.0%	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]	2,387.6	1,018.8
Westbrook Energy Ltd.	100.0%	-	0.0	[illegible]	0.0	[illegible]	0.0	[illegible]		

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[2] For the Gas Conservation Change column, a blank cell indicates that a value was not reported for 2011.

PROVINCIAL RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS CONS CHANGE[2]	GAS FLARED + VENTED (1000 m^3)	GAS FLARED + VENTED RANK	GAS FLARED (1000 m^3)	FLARE RANK	GAS VENTED (1000 m^3)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD (1000 m^3)
Desmarais Energy Corporation	100.0%	0.0%	0.0	364	0.0	294	0.0	266	1,329.6	1,151.5
Elkwater Resources Ltd.	100.0%	0.0%	0.0	364	0.0	294	0.0	266	298.0	1,191.0
Progress Energy Canada Ltd.	100.0%	-	0.0	364	0.0	294	0.0	266	3,962.6	1,202.7
Steen River Oil & Gas Ltd.	100.0%	0.0%	0.0	364	0.0	294	0.0	266	16,973.7	1,270.1
Alpetro Resources Ltd.	100.0%	0.0%	0.0	364	0.0	294	0.0	266	383.9	1,300.4
RIA Resources Corp.	100.0%	0.0%	0.0	364	0.0	294	0.0	266	1,647.2	1,329.3
Williston Hunter Canada, Inc.	100.0%	0.0%	0.0	364	0.0	294	0.0	266	17,644.2	1,915.6
Hawk Exploration Ltd.	100.0%	0.2%	0.0	364	0.0	294	0.0	266	14,724.0	2,153.8
Yoho Resources Inc.	100.0%	0.0%	0.0	364	0.0	294	0.0	266	272.9	2,557.7
Relentless Resources Ltd.	100.0%	0.0%	0.0	364	0.0	294	0.0	266	129.4	2,631.3
Northern Patriot Oil & Gas Ltd.	100.0%	0.0%	0.0	364	0.0	294	0.0	266	16,248.5	3,405.1
Westhill Resources Limited	100.0%	0.0%	0.0	364	0.0	294	0.0	266	914.6	5,809.5
Knowledge Energy Inc.	100.0%	0.0%	0.0	364	0.0	294	0.0	266	1,618.9	5,827.6
AltaGas Ltd.	100.0%	5.6%	0.0	364	0.0	294	0.0	266	6,081.2	6,762.6
Inception Exploration Ltd.	100.0%	0.0%	0.0	364	0.0	294	0.0	266	3,082.1	7,862.5
Corinthian Exploration Corp.	100.0%	-	0.0	364	0.0	294	0.0	266	2,615.1	11,642.0
Pine Cliff Energy Ltd.	100.0%	-	0.0	364	0.0	294	0.0	266	1,747.4	14,560.1
Birchwood Resources Inc.	N/A	N/A	0.0	N/A	0.0	294	0.0	266	25.8	-
CNPC International (Canada) Ltd.	N/A	N/A	0.0	N/A	0.0	294	0.0	266	46.4	-
E-T Energy Ltd.	N/A	N/A	0.0	N/A	0.0	294	0.0	266	187.2	-
Fortune Energy Inc.	N/A	N/A	0.0	N/A	0.0	294	0.0	266	22.7	-
Land Petroleum International Inc.	N/A	N/A	0.0	N/A	0.0	294	0.0	266	249.6	-
Legend Energy Canada Ltd.	N/A	N/A	0.0	N/A	0.0	294	0.0	266	211.4	-
Nordic Oil & Gas Ltd.	N/A	N/A	0.0	N/A	0.0	294	0.0	266	59.8	-
Northern Utilities (Sask.) Ltd.	N/A	N/A	0.0	N/A	0.0	294	0.0	266	250.5	-
Sabanero Energy Corp.	N/A	N/A	0.0	N/A	0.0	294	0.0	266	281.8	-
Sifton Energy Inc.	N/A	N/A	0.0	N/A	0.0	294	0.0	266	11.6	-
Sunrise Energy Ltd.	N/A	N/A	0.0	N/A	0.0	294	0.0	266	543.2	-
The Locke Stock & Barrel Company Ltd.	N/A	N/A	0.0	N/A	0.0	294	0.0	266	532.6	-
PROVINCIAL TOTALS	**94.2%**		**975,648.7**		**545,338.7**		**430,310.0**		**81,133,559.9**	**16,690,665.1**

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.
[2] For the Gas Conservation Change column, a blank cell indicates that a value was not reported for 2011.

FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
BONNYVILLE CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED ($1000\ m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000\ m^3$)	FLARE RANK	GAS VENTED ($1000\ m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000\ m^3$)
Canadian Natural Resources Limited	76.1%	209,166.9	1	3,352.7	2	205,814.2	1	13,264,681.4	876,737.2
Husky Oil Operations Limited	55.4%	33,115.1	2	169.8	9	32,945.3	2	1,214,267.4	74,186.0
Devon Canada	86.4%	18,012.2	3	52.5	12	17,959.7	3	4,819,856.0	132,238.7
Twin Butte Energy Ltd.	39.1%	12,882.0	4	61.9	11	12,820.1	4	387,181.9	21,141.3
Cenovus FCCL Ltd.	92.5%	11,704.4	5	11,605.1	1	99.3	17	10,380,084.3	155,538.2
Cenovus Energy Inc.	80.1%	4,157.0	6	430.1	5	3,726.9	5	1,343,935.4	20,866.3
Bonavista Energy Corporation	75.2%	2,280.9	7	-	18	2,280.9	6	46,514.7	9,203.0
Imperial Oil Resources	99.5%	2,264.0	8	2,105.8	3	158.2	12	8,949,622.3	411,174.9
Connacher Oil And Gas Limited	89.5%	1,164.4	9	1,164.4	4	-	26	691,017.8	11,105.7
Blackpearl Resources Inc.	8.4%	373.9	10	27.2	15	346.7	8	48,408.4	408.2
Manitok Energy Inc.	36.8%	365.9	11	-	18	365.9	7	4,230.9	578.8
Japan Canada Oil Sands Limited	94.1%	354.2	12	354.2	6	-	26	349,549.2	5,984.7
Legacy Oil + Gas Inc.	96.4%	351.9	13	329.9	7	22.0	21	8,778.0	9,879.5
Twoco Petroleums Ltd.	61.2%	232.3	14	-	18	232.3	9	1,734.2	598.5
ConocoPhillips Canada Resources Corp.	98.8%	220.1	15	220.1	8	-	26	1,443,274.0	18,140.9
Petromin Resources Ltd.	0.0%	195.8	16	-	18	195.8	10	2,862.1	195.8
Harvest Operations Corp.	92.5%	161.5	17	-	18	161.5	11	21,453.9	2,145.5
Signalta Resources Limited	12.3%	150.9	18	-	18	150.9	13	582.0	172.0
Bellatrix Exploration Ltd.	0.0%	146.0	19	-	18	146.0	14	7,035.7	146.0
Rife Resources Ltd.	50.1%	133.3	20	-	18	133.3	15	1,328.0	267.1
Baytex Energy Ltd.	98.8%	126.7	21	-	18	126.7	16	76,255.9	10,600.4
Broadview Energy Ltd.	28.3%	94.9	22	-	18	94.9	18	1,065.6	132.3
Windtalker Energy Corp.	92.8%	84.6	23	-	18	84.6	19	66,398.1	1,176.4
Shell Canada Energy	99.0%	62.4	24	62.4	10	-	26	255,527.5	6,449.6
Pengrowth Energy Corporation	95.0%	42.3	25	42.3	13	-	26	52,327.4	847.4
Statoil Canada Ltd.	99.0%	37.0	26	37.0	14	-	26	950,397.0	3,717.3
Solara Exploration Ltd.	6.9%	24.2	27	-	18	24.2	20	4,518.3	26.0
Sunshine Oilsands Ltd.	0.0%	18.8	28	-	18	18.8	22	34,664.4	18.8
Spur Resources Ltd.	99.0%	10.8	29	-	18	10.8	23	321.0	1,085.8
Frog Lake Energy Resources Corp.	94.7%	5.8	30	-	18	5.8	24	3,872.9	108.7
Southern Pacific Resource Corp.	80.7%	5.0	31	5.0	16	-	26	12,442.0	25.9
Trafina Energy Ltd.	97.5%	4.1	32	-	18	4.1	25	1,758.5	166.1
Suncor Energy Inc.	99.8%	3.6	33	3.6	17	-	26	1,568,468.1	1,601.5
Birchwood Resources Inc.	0.0%	-	34	-	18	-	26	25.8	-
Celtic Exploration ULC	100.0%	-	34	-	18	-	26	524.7	689.0

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
BONNYVILLE CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED ($1000 m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000 m^3$)	FLARE RANK	GAS VENTED ($1000 m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000 m^3$)
CNPC International (Canada) Ltd.	0.0%	-	34	-	18	-	26	46.4	-
E-T Energy Ltd.	0.0%	-	34	-	18	-	26	167.2	-
Gear Energy Ltd.	0.0%	-	34	-	18	-	26	10.1	-
Long Run Exploration Ltd.	100.0%	-	34	-	18	-	26	1,096.4	53.1
TOTALS FOR BONNYVILLE	**83.2%**	**297,952.9**		**20,034.0**		**277,938.9**		**46,616,394.9**	**1,777,466.6**

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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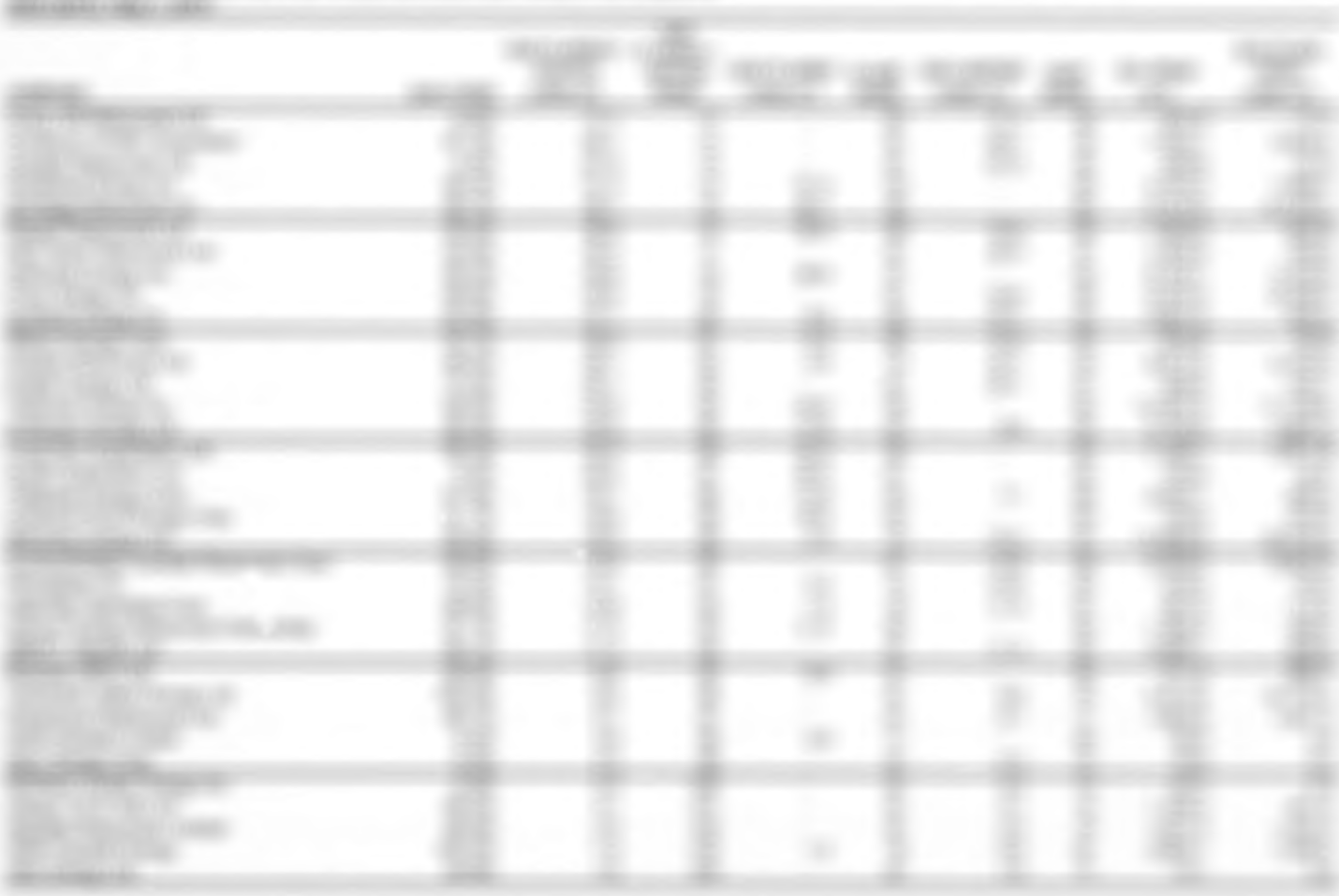

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Cenovus Energy Inc	100.0%	1.9	100	–	81	1.9	78	1,827.8	1,827.8	658.4
ARC Resources Ltd.	100.0%	1.1	100	–	81	1.1	79	180.5	180.5	71.9
Suncor Energy Oil and Gas Partnership	100.0%	0.1	100	0.1	77	–	83	750.3	750.3	250.5
Murphy Oil Company Inc.	100.0%	1.3	107	–	81	1.3	89	277.9	277.9	108.3
Tokyo Resources Ltd.	100.0%	1.3	107	–	81	1.3	89	541.2	541.2	1,971.5
Pipeline Infrastructure	100.0%	3.8	108	3.8	79	–	93	2,971.8	2,971.8	11,288.3
Exhibition Oil & Gas Inc.	79.3%	3.8	108	–	81	3.8	82	557.2	557.2	2.4
Atlantic Oil & Gas Limited	100.0%	–	110	–	81	–	93	1,972.9	1,972.9	609.3
Pipeline Resources Ltd.	100.0%	–	110	–	81	–	93	265.4	265.4	1,250.8
Arsenal Energy Inc.	3.0%	–	110	–	81	–	93	283.8	283.8	–
Pipeline Services Ltd.	100.0%	–	110	–	81	–	93	31.5	31.5	2.8
Europa Development Corporation Ltd.	100.0%	3.0	110	3.0	81	3.0	93	210.3	210.3	3,397.9
Helix Exploration (U.K.)	100.0%	–	110	–	81	–	93	1,834.3	1,834.3	1,100.3
Canterra Petroleum Company Ltd.	100.0%	–	110	–	81	–	93	710.1	710.1	383.3
Arrow Energy Marketing Limited	100.0%	–	110	–	81	–	93	2,372.4	2,372.4	2,778.4
Pipeline Resources Ltd.	100.0%	–	110	–	81	–	93	152.7	152.7	481.7
Emerald Corporation	100.0%	3.0	110	3.0	81	3.0	93	270.3	270.3	913.8
Gateway Petroleum Inc.	3.0%	3.0	110	3.0	81	3.0	93	98.7	98.7	–
MI Energy Ltd.	100.0%	3.0	110	3.0	81	3.0	93	153.3	153.3	497.5
Lake Petroleum International Inc.	3.0%	3.0	110	3.0	81	3.0	93	232.8	232.8	–
Pipeline Services Inc.	100.0%	3.0	110	3.0	81	3.0	93	128.7	128.7	1,310.9
Mosaic Energy Ltd.	100.0%	–	110	–	81	–	93	7,949.1	7,949.1	8,468.3
Mount Hawk Energy Corp.	100.0%	–	110	–	81	–	93	238.3	238.3	17.5
Nanaimo Energy Corporation	100.0%	–	110	–	81	–	93	801.7	801.7	648.3
Northern Horse Oil & Gas Ltd.	100.0%	–	110	–	81	–	93	10,869.9	10,869.9	2,953.4
Pipeline Resources Inc.	100.0%	–	110	–	81	–	93	–	–	114.7
Petro Rogers Inc.	100.0%	–	110	–	81	–	93	497.8	497.8	36.3
Ring Cliff Energy Ltd.	100.0%	–	110	–	81	–	93	1,797.8	1,797.8	14,560.1
Rimfire Energy Inc.	100.0%	–	110	–	81	–	93	120.4	120.4	183.7
Shorncliffe Energy Ltd.	100.0%	–	110	–	81	–	93	340.1	340.1	831.9
Pipeline Energy Inc.	3.0%	–	110	–	81	–	93	11.8	11.8	–
Solara Exploration Ltd.	100.0%	–	110	–	81	–	93	3,011.8	3,011.8	3,852.7
Spindle Resources Corp.	100.0%	–	110	–	81	–	93	84.3	84.3	54.2
Superman Resources Inc.	100.0%	–	110	–	81	–	93	638.3	638.3	1,438.7
Surge Energy Inc.	100.0%	–	110	–	81	–	93	253.9	253.9	908.5

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
DRAYTON VALLEY CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

CORP-ID/V	GAS CONS	GAS FLARED + VENTED (1000 m³)	GAS FLARED + VENTED RANK	GAS FLARED (1000 m³)	FLARE RANK	GAS VENTED (1000 m³)	VENT RANK	OIL PROD (m³)	SOL'N GAS PROD (1000 m³)
Waldron Energy Corporation	0.0%	-	110	-	81	-	83	41.0	-
Westbrink Energy Ltd.	100.0%	-	110	-	81	-	83	2,387.6	1,018.8
WLA Investment Ltd.	100.0%	-	110	-	81	-	83	1,332.0	367.8
TOTALS FOR DRAYTON VALLEY	**96.4%**	**117,706.8**		**102,990.9**		**14,715.8**		**5,083,397.7**	**3,228,222.4**

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
GRANDE PRAIRIE CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED ($1000\ m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000\ m^3$)	FLARE RANK	GAS VENTED ($1000\ m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000\ m^3$)
Penn West Petroleum Ltd.	83.7%	15,536.1	1	15,362.6	1	173.5	15	268,914.8	95,305.7
Baytex Energy Ltd.	83.0%	8,178.8	2	7,830.9	2	347.9	4	1,135,048.3	47,986.3
Canadian Natural Resources Limited	98.5%	7,652.4	3	6,096.5	3	1,555.9	1	683,328.7	493,461.8
Trilogy Resources Ltd.	91.7%	3,848.0	4	3,721.6	4	126.4	21	88,252.1	46,611.1
Murphy Oil Company Ltd.	33.3%	3,610.9	5	3,610.9	5	-	65	53,092.1	5,412.6
Encana Corporation	91.8%	3,033.1	6	3,033.1	6	-	65	40,082.3	37,095.7
ARC Resources Ltd.	99.0%	2,968.1	7	2,913.9	7	54.2	33	262,805.1	307,737.6
TAQA North Ltd.	88.2%	2,850.4	8	1,724.4	11	1,126.0	2	28,878.0	24,170.8
Guide Exploration Ltd.	97.2%	2,706.3	9	2,605.9	8	100.4	26	150,068.3	96,668.1
Birchcliff Energy Ltd.	97.7%	2,506.7	10	2,282.2	9	224.5	10	215,201.1	107,972.7
Surge Energy Inc.	98.6%	1,771.3	11	1,771.3	10	-	65	100,175.1	129,249.7
Devon Canada	98.4%	1,676.7	12	1,332.4	15	344.3	5	156,299.1	107,824.0
Crew Energy Inc.	36.6%	1,619.7	13	1,517.6	12	102.1	25	5,778.0	2,553.9
Flow-Back Oil & Gas Ltd.	0.0%	1,472.4	14	1,472.4	13	-	65	1,178.8	1,472.4
Exshaw Oil Corp.	99.0%	1,406.6	15	1,406.6	14	-	65	126,336.7	133,810.1
Whitecap Resources Inc.	98.7%	1,397.2	16	1,217.7	16	179.5	14	137,309.6	105,976.7
Husky Oil Operations Limited	99.4%	1,288.3	17	444.1	34	844.2	3	221,215.6	226,526.7
Bonavista Energy Corporation	98.4%	1,215.3	18	987.8	17	227.5	9	102,308.4	74,067.4
Conocophillips Canada Energy Partnership	94.1%	1,005.9	19	972.3	18	33.6	39	17,080.4	17,000.5
Athabasca Oil Corporation	94.8%	871.2	20	654.5	25	216.7	11	12,286.4	16,752.5
Long Run Exploration Ltd.	98.0%	809.6	21	742.8	22	66.8	31	71,778.5	40,496.5
Storm Resources Ltd.	97.2%	796.4	22	724.6	23	71.8	30	32,742.7	28,754.4
Shoreline Energy Corp.	86.1%	788.8	23	788.8	19	-	65	8,684.6	5,683.7
Bellamont Exploration Ltd.	91.7%	779.6	24	753.3	21	26.3	43	11,585.5	9,438.9
Expand Energy Corporation	0.0%	774.3	25	774.3	20	-	65	2,110.2	774.3
Apache Canada Ltd.	88.8%	723.2	26	481.6	31	241.6	8	44,218.9	6,461.8
Ki Exploration Inc.	68.4%	710.8	27	710.8	24	-	65	3,351.9	2,247.6
Sonde Resources Corp.	32.8%	699.1	28	599.8	26	99.3	27	2,159.7	1,040.1
Cequence Energy Ltd.	96.3%	605.2	29	482.8	30	122.4	22	11,796.2	16,276.1
Paramount Resources Ltd.	97.3%	596.8	30	583.6	27	13.2	49	12,557.1	21,856.5
Barnwell of Canada, Limited	73.4%	561.3	31	509.1	28	52.2	34	4,048.5	2,108.5
Harvest Operations Corp.	97.7%	550.8	32	386.1	36	164.7	18	70,488.2	23,886.1
Pengrowth Energy Corporation	81.8%	499.2	33	378.2	37	121.0	23	15,136.4	2,741.3
Exoro Energy Inc.	57.9%	498.6	34	498.6	29	-	65	826.1	1,184.4
Sydco Energy Inc.	85.6%	474.1	35	454.1	32	20.0	44	23,715.2	3,294.5

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
GRANDE PRAIRIE CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED ($1000 m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000 m^3$)	FLARE RANK	GAS VENTED ($1000 m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000 m^3$)
Crescent Point Energy Corp.	98.2%	447.2	36	447.2	33	-	65	44,063.0	24,294.6
Mosaic Energy Ltd.	98.5%	442.4	37	134.0	55	308.4	6	16,159.9	28,513.0
Celtic Exploration ULC	78.8%	433.7	38	433.7	35	-	65	2,297.1	2,049.7
Canadian International Oil Operating Corp.	83.3%	431.9	39	289.9	42	142.0	19	5,227.6	2,593.1
Rife Resources Ltd.	98.5%	408.5	40	368.8	38	39.7	35	4,562.5	26,719.0
Iteration Energy	99.2%	401.5	41	219.5	44	182.0	13	52,359.4	51,316.1
Shell Canada Energy	98.6%	398.4	42	226.7	43	171.7	16	415,438.5	27,534.1
NAL Resources Limited	99.8%	392.6	43	313.2	41	79.4	28	90,807.7	166,465.4
Barrick Energy Inc.	99.4%	343.4	44	343.4	39	-	65	207,790.0	55,021.6
Canstone Energy Ltd.	0.0%	316.5	45	316.3	40	0.2	63	2,495.8	316.5
Signalta Resources Limited	1.2%	283.5	46	19.0	79	264.5	7	1,875.5	286.8
Petrus Resources Ltd.	97.1%	245.0	47	217.4	46	27.6	41	20,772.6	8,381.8
Bering Exploration, Company, Ulc	0.0%	234.0	48	96.1	64	137.9	20	4,949.3	234.0
Novus Energy Inc.	91.9%	219.0	49	219.0	45	-	65	2,625.4	2,717.2
Enerplus Partnership	99.4%	212.2	50	136.0	54	76.2	29	49,637.5	37,717.6
Twin Butte Energy Ltd.	99.2%	209.3	51	-	68	209.3	12	4,660.3	26,933.1
Progress Energy Ltd.	99.4%	208.6	52	150.3	53	58.3	32	34,268.2	32,303.1
EOG Resources Canada Inc.	71.4%	204.5	53	34.9	73	169.6	17	2,336.3	713.7
Perpetual Energy Inc.	21.8%	197.3	54	197.3	47	-	65	391.9	252.3
Seven Generations Energy Ltd.	96.4%	194.2	55	194.2	48	-	65	1,729.1	5,459.4
Glenogle Energy Inc.	98.3%	187.0	56	187.0	49	-	65	20,626.9	11,095.5
Sinopec Daylight Energy Ltd.	98.9%	179.3	57	75.3	66	104.0	24	37,982.4	15,775.1
Tourmaline Oil Corp.	0.0%	171.4	58	171.4	50	-	65	452.0	171.4
Bernum Petroleum Ltd.	88.9%	165.0	59	128.3	57	36.7	38	48,437.1	1,491.2
Argosy Energy Inc.	0.0%	155.8	60	155.8	51	-	65	709.6	155.8
Omers Energy Inc.	99.2%	153.6	61	153.5	52	0.1	64	15,550.9	18,615.6
Terra Energy Corp.	93.8%	143.8	62	127.5	58	16.3	45	10,096.9	2,313.5
Dirham Oil (2000) Inc.	0.0%	131.7	63	131.7	56	-	65	333.8	131.7
Imperial Oil Resources	95.9%	118.6	64	112.1	61	6.5	55	28,513.4	2,887.6
Rimfire Energy Inc.	93.5%	116.4	65	116.4	59	-	65	1,885.3	1,780.8
Charger Energy Corp.	93.6%	115.6	66	113.7	60	1.9	60	4,275.3	1,812.0
Chinook Energy Partnership	1.7%	109.3	67	109.3	62	-	65	569.8	111.2
Dewpoint Resources Ltd.	0.0%	109.0	68	109.0	63	-	65	710.5	109.0
Longview Oil Corp.	99.4%	87.5	69	48.6	70	38.9	36	26,512.4	14,963.4
Navarone Energy Corporation	0.0%	76.3	70	76.3	65	-	65	462.5	76.3

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
ORANGE PRAIRIE CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED (1000 m^3)	GAS FLARED + VENTED RANK	GAS FLARED (1000 m^3)	FLARE RANK	GAS VENTED (1000 m^3)	VENT RANK	OIL PROD (m^3)	OIL'S GAS PROD (1000 m^3)
Ravenwood Energy Corp.	95.5%	76.3	71	76.3	56	-	65	8,995.3	1,888.7
Insignia Energy Ltd.	95.9%	62.7	72	54.5	49	8.2	53	5,853.7	2,038.3
Ribbon Creek Resources Inc.	98.8%	56.8	73	28.5	17	28.3	40	4,356.7	4,547.3
Shningdan Energy Ltd.	95.3%	56.8	73	56.8	67	-	45	1,233.1	1,213.4
Cumberland Oil & Gas Ltd.	39.6%	53.2	74	53.1	49	0.1	58	2,961.8	79.3
Marcal Energy Inc.	96.5%	48.1	75	48.1	51	-	55	3,146.3	1,387.7
Polar Star Canadian Oil And Gas, Inc.	99.3%	45.8	76	45.8	72	-	45	10,881.7	8,731.3
Artek Exploration Ltd.	99.0%	38.5	77	-	46	38.5	37	4,045.4	7,474.4
Bay Trail Resources Ltd.	44.0%	31.8	78	31.8	74	-	45	108.5	56.8
Pace Oil & Gas Ltd.	99.4%	31.8	79	31.8	75	-	45	170,463.3	5,994.8
Radius Resources Corp.	0.0%	28.8	80	28.8	4	-	55	423.6	36.8
Equal Energy Ltd.	96.3%	28.5	81	28.5	77	-	45	8,759.6	772.6
Cayro Exploration Ltd.	99.8%	27.4	82	-	46	27.4	42	83,143.3	13,488.6
1471002 Alberta Ltd.	28.8%	25.2	83	25.2	79	-	45	116.3	35.4
Unconventional Gas Resources Canada Operating, Inc.	97.3%	19.0	84	5.5	63	13.6	46	709.6	404.7
Velvet Energy Ltd.	96.5%	16.8	85	8.8	57	8.2	53	8,752.1	1,715.8
Summerland Energy Inc.	79.1%	16.3	86	15.8	60	0.5	62	455.3	74.4
Glencoe Resources Ltd.	0.0%	15.6	87	-	46	15.6	46	458.1	15.6
Transaction Oil & Gas Ventures Inc.	0.0%	14.7	88	-	46	14.7	47	1,284.1	14.7
Clampett Energy Ltd.	93.3%	11.8	89	1.1	47	10.6	51	1,944.0	171.5
Coastal Resources Limited	96.6%	10.6	90	-	46	10.6	48	1,111.8	752.8
NuVista Energy Ltd.	99.9%	8.9	91	-	46	8.9	52	4,833.1	3,953.6
Kelbob Energy Corp.	19.2%	8.4	92	8.4	52	-	46	552.1	10.4
ConocoPhillips Canada (BRC) Partnership	100.0%	6.6	93	-	46	6.6	54	44,869.9	40,663.2
BNP Energy Inc.	100.0%	3.8	94	-	46	3.8	56	131,027.6	56,591.8
Tallahassee Resources Inc.	0.0%	3.8	94	-	46	3.8	56	886.8	3.8
Reber Exploration Ltd.	0.0%	3.6	95	-	46	3.6	57	138.5	3.6
Peyto Exploration & Development Corp.	49.8%	2.4	96	-	46	2.4	58	730.6	1,236.5
Delphi Energy Corp.	100.0%	2.0	97	-	46	2.0	59	45,034.7	26,328.8
Luxor Oil And Gas Ltd.	99.3%	1.5	97	-	46	1.5	59	398.0	365.3
Sunrise Energy Oil and Gas Partnership	99.4%	1.5	98	1.5	64	-	46	211.6	308.4
Kaiser Exploration Ltd.	100.0%	1.5	99	1.5	45	-	46	14,999.1	16,717.2
Ascent Energy Ltd.	99.7%	1.4	100	-	46	1.4	61	639.6	472.2
Deethree Exploration Ltd.	100.0%	1.3	101	1.3	45	-	45	4,566.3	13,626.4
Sun Star Energy Inc.	100.0%	0.1	102	-	46	0.1	64	919.4	1,495.4

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

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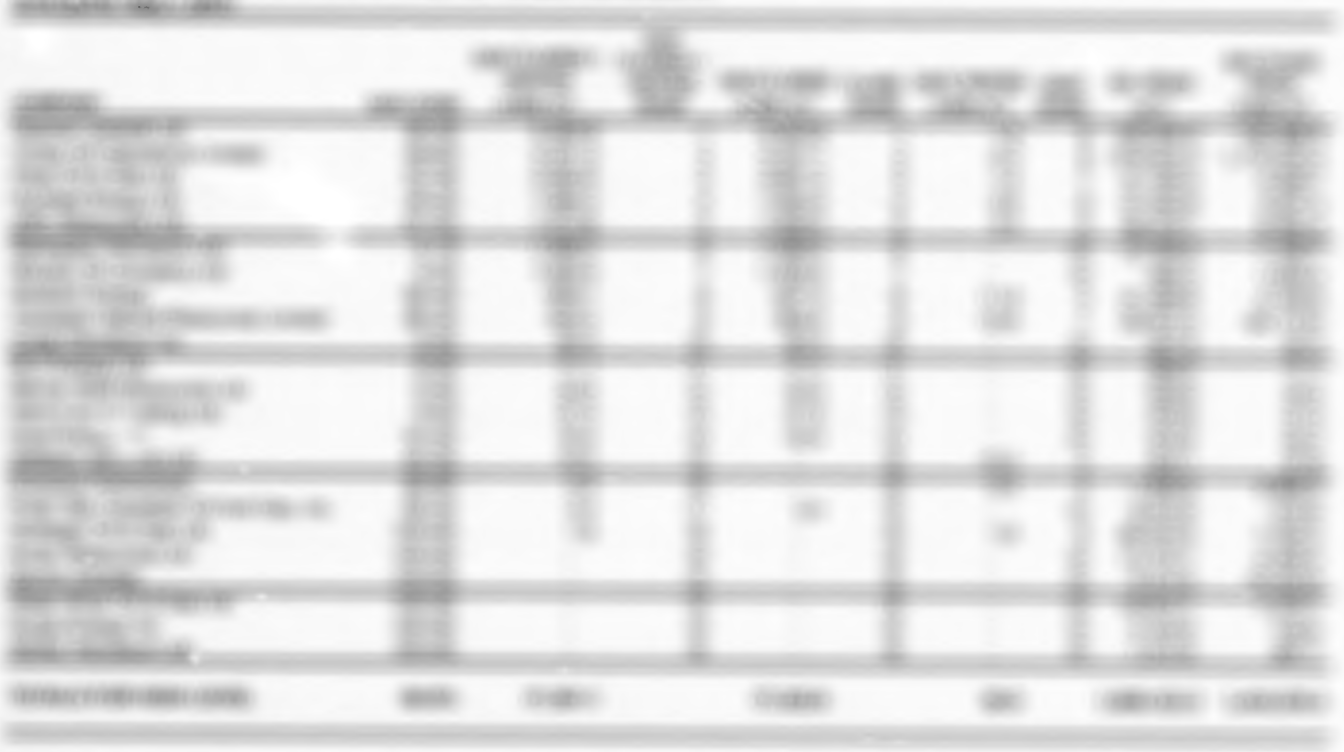

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FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
MEDICINE HAT CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED (1000 m³)	GAS FLARED + VENTED RANK	GAS FLARED (1000 m³)	FLARE RANK	GAS VENTED (1000 m³)	VENT RANK	OIL PROD (m³)	SOL'N GAS PROD (1000 m³)
Nexus Energy Inc.	86.0%	181.3	36	181.3	32	-	56	973.2	1,292.6
Alberta Petroleum Energy Limited	7.4%	174.7	37	123.6	37	51.1	17	3,725.2	188.7
Argosy Energy Inc.	0.0%	137.1	38	129.4	35	7.7	35	999.0	137.1
Conserve Oil 1st Corporation	71.0%	132.7	39	132.7	34	-	56	4,108.2	458.2
Bowood Energy Ltd.	0.0%	123.8	40	123.8	36	-	56	1,077.7	123.8
Celtic Exploration ULC	97.3%	117.5	41	72.6	42	44.9	19	18,677.5	4,397.7
Bonavista Energy Corporation	98.6%	114.3	42	30.7	47	83.6	12	104,641.6	8,287.1
Tower Ridge Enterprises Corp.	17.9%	111.2	43	-	61	111.2	11	379.5	135.5
Broadview Energy Ltd.	28.6%	100.1	44	84.0	39	16.1	30	5,043.1	140.1
Legacy Oil + Gas Inc.	56.3%	80.7	45	80.7	40	-	56	2,026.6	184.7
Standard Exploration Ltd.	34.7%	78.8	46	78.8	41	-	56	4,278.1	120.6
Sanford Petroleum Ltd.	0.0%	72.6	47	10.1	54	62.5	14	2,801.0	72.6
Cardinal Energy Ltd.	0.0%	71.2	48	56.0	43	15.2	31	115.6	71.2
Twin Butte Energy Ltd.	94.1%	69.3	49	29.6	50	39.7	22	2,430.5	1,175.9
Marquee Energy Ltd.	99.6%	49.1	50	49.1	44	-	56	15,577.3	12,019.5
NuVista Energy Ltd.	85.1%	48.9	51	-	61	48.9	18	2,030.6	328.4
Corex Resources Ltd.	98.0%	43.5	52	43.5	45	-	56	3,662.2	2,174.8
ConocoPhillips Canada Resources Corp.	99.3%	42.8	53	-	61	42.8	20	11,774.2	5,720.1
Wild Stream Exploration Inc.	84.9%	42.5	54	-	61	42.5	21	2,717.5	281.6
Baytex Energy Ltd.	99.1%	29.8	55	29.8	49	-	56	8,484.9	3,264.1
Ki Exploration Inc.	37.6%	28.7	56	-	61	28.7	24	708.8	46.0
Marquee Petroleum Ltd.	81.6%	23.7	57	23.7	51	-	56	492.1	129.0
TyNewest Limited	87.8%	23.0	58	-	61	23.0	27	2,705.3	188.6
Indra Oil & Gas Ltd.	0.0%	19.2	59	-	61	19.2	28	502.1	19.2
Raimount Energy Inc.	0.0%	16.5	60	16.5	52	-	56	70.0	16.5
Lgx Oil + Gas Inc.	94.6%	16.4	61	16.4	53	-	56	3,098.6	305.2
Ridal Resource Ltd.	0.0%	16.2	62	-	61	16.2	29	193.2	16.2
Petroglobe Inc.	0.0%	11.5	63	6.4	56	5.1	39	261.8	11.5
NAL Resources Limited	95.9%	11.4	64	9.3	55	2.1	47	2,630.5	274.4
Direct Energy Marketing Limited	99.9%	8.9	65	-	61	8.9	34	14,586.9	11,286.3
Exall Energy Corporation	0.0%	5.5	66	-	61	5.5	37	500.3	5.5
935821 Alberta Ltd.	0.0%	5.4	67	-	61	5.4	38	1,297.0	5.4
White Ram Resources Ltd.	77.4%	4.8	68	-	61	4.8	40	284.6	21.2
Questerre Energy Corporation	0.0%	3.9	69	-	61	3.9	41	184.8	3.9
Edalia Energy Inc.	0.0%	3.7	70	-	61	3.7	42	811.6	3.7

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
MEDICINE HAT CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED ($1000\ m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000\ m^3$)	FLARE RANK	GAS VENTED ($1000\ m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000\ m^3$)
Fairwest Energy Corporation	99.8%	3.7	70	3.7	57	-	56	3,207.7	2,201.5
Strategic Oil & Gas Ltd.	99.5%	3.2	71	-	61	3.2	44	6,363.1	670.1
Band Energy Resources Ltd.	70.4%	2.4	72	0.2	60	2.2	46	291.9	8.1
Petrobakken Energy Ltd.	99.4%	2.3	73	-	61	2.3	45	6,024.5	398.5
Eiger Energy Ltd.	98.8%	2.2	74	2.2	58	-	56	4,917.8	187.5
Anterra Energy Inc.	88.8%	1.5	75	-	61	1.5	48	1,754.4	13.4
Custom Energy Group Ltd.	45.5%	1.2	76	-	61	1.2	49	492.1	2.2
Red Coat Oil & Gas (2005) Ltd.	0.0%	1.0	77	1.0	59	-	56	30.4	1.0
Success Resources Ltd.	99.8%	1.0	77	1.0	59	-	56	491.9	394.7
Ascent Energy Ltd.	97.7%	0.8	78	-	61	0.8	50	234.8	34.8
Sekur Energy Management Corp.	80.6%	0.7	79	-	61	0.7	51	23.6	3.6
Gryphon Petroleum Corp.	100.0%	0.2	80	-	61	0.2	54	5,374.9	676.7
Northern Hunter Energy Inc.	100.0%	0.1	81	-	61	0.1	55	1,179.0	548.1
1288131 Alberta Ltd.	100.0%	-	82	-	61	-	56	770.6	381.2
1506928 Alberta Ltd.	100.0%	-	82	-	61	-	56	757.1	10.9
Avalon Energy Ltd.	100.0%	-	82	-	61	-	56	1,047.9	108.3
BNP Resources Inc.	100.0%	-	82	-	61	-	56	104.8	91.0
Canadian Coyote Energy Ltd.	100.0%	-	82	-	61	-	56	1,564.9	26.4
Coastal Resources Limited	100.0%	-	82	-	61	-	56	149.1	86.6
Edge Resources Inc.	100.0%	-	82	-	61	-	56	5,299.2	247.2
Enerstar Petroleum Corp.	100.0%	-	82	-	61	-	56	369.7	15.6
Exoro Energy Inc.	100.0%	-	82	-	61	-	56	305.7	208.9
International Frontier Resources Corporation	100.0%	-	82	-	61	-	56	2,237.1	93.8
Invicta Energy Corp.	100.0%	-	82	-	61	-	56	365.7	330.9
Lateral Capital Corp.	100.0%	-	82	-	61	-	56	47.4	2.5
Palliser Oil & Gas Corporation	0.0%	-	82	-	61	-	56	348.8	-
Paramount Resources Ltd.	100.0%	-	82	-	61	-	56	18,851.5	6,777.8
Reid Resources Ltd.	100.0%	-	82	-	61	-	56	472.5	7.0
Ruger Energy Inc.	100.0%	-	82	-	61	-	56	368.6	318.3
Silver Bay Resources Ltd.	100.0%	-	82	-	61	-	56	247.9	273.2
Solara Exploration Ltd.	100.0%	-	82	-	61	-	56	-	47.1
Westdrum Energy Ltd.	100.0%	-	82	-	61	-	56	-	47.5
TOTALS FOR MEDICINE HAT	**92.3%**	**52,238.1**		**47,052.7**		**5,185.4**		**4,022,234.8**	**681,777.1**

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
MIDNAPORE CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED ($1000 m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000 m^3$)	FLARE RANK	GAS VENTED ($1000 m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000 m^3$)
TriOil Resources Ltd.	24.8%	16,439.0	1	16,439.0	1	-	63	37,098.7	21,844.5
Petrobakken Energy Ltd.	74.3%	5,559.3	2	5,507.8	2	51.5	28	41,958.7	21,668.3
Pengrowth Energy Corporation	92.8%	4,189.3	3	3,971.2	4	218.1	5	109,205.8	57,945.8
Equal Energy Ltd.	22.9%	4,094.0	4	4,066.1	3	27.9	36	12,684.0	5,312.1
NAL Resources Limited	92.5%	3,647.9	5	3,468.5	5	179.4	10	71,337.0	48,448.9
Murphy Oil Company Ltd.	0.0%	3,129.1	6	3,129.1	6	-	63	12,221.6	3,129.1
Bearspaw Petroleum Ltd.	24.9%	2,161.3	7	2,161.3	7	-	63	12,476.2	2,877.2
Pace Oil & Gas Ltd.	94.3%	1,983.1	8	1,922.9	8	60.2	27	78,571.0	35,042.8
Husky Oil Operations Limited	98.7%	1,144.2	9	960.0	11	184.2	8	74,738.0	90,303.3
Tamarack Valley Energy Ltd.	82.1%	1,002.1	10	965.8	9	36.3	34	13,258.1	5,600.4
TORC Oil & Gas Ltd.	0.4%	978.4	11	960.1	10	18.3	42	7,643.5	981.8
Bonavista Energy Corporation	91.3%	859.3	12	330.7	20	528.6	1	53,938.6	9,822.3
Cenovus Energy Inc.	99.5%	795.2	13	615.6	13	179.6	9	358,098.2	168,275.9
Veredus Resources Ltd.	62.5%	793.9	14	744.6	12	49.3	29	9,405.9	2,114.9
Compton Petroleum Corporation	97.4%	660.3	15	395.7	16	264.6	3	19,106.8	24,922.7
Wolf Coulee Resources Inc.	96.2%	492.9	16	470.8	14	22.1	39	15,542.5	12,957.1
Surge Energy Inc.	84.8%	454.8	17	337.6	19	117.2	18	6,766.5	2,982.9
Nexen Inc.	0.0%	410.4	18	410.4	15	-	63	2,721.1	410.4
Crescent Point Energy Corp.	97.5%	394.3	19	391.1	17	3.2	54	36,889.8	15,464.6
Argosy Energy Inc.	31.2%	383.5	20	383.5	18	-	63	2,555.8	557.7
Conocophillips Canada Energy Partnership	97.9%	377.7	21	256.9	21	120.8	17	15,638.6	17,635.1
Canadian Natural Resources Limited	99.1%	345.9	22	186.6	25	159.3	12	159,186.3	39,808.4
Conserve Oil 1st Corporation	71.1%	278.1	23	0.2	57	277.9	2	11,673.5	962.9
Legacy Oil + Gas Inc.	99.2%	265.6	24	173.4	26	92.2	20	148,734.9	34,800.5
Kaiser Exploration Ltd.	34.8%	263.4	25	28.1	38	235.3	4	541.4	403.8
Penn West Petroleum Ltd.	98.3%	239.1	26	70.0	34	169.1	11	36,735.2	14,403.3
Traverse Energy Ltd.	96.7%	231.4	27	193.9	24	37.5	33	6,923.9	7,094.1
Harvest Operations Corp.	99.3%	226.1	28	212.9	22	13.2	44	44,353.4	30,272.2
ExxonMobil Canada Ltd. & ExxonMobil Resources Comp	95.4%	220.1	29	13.8	46	206.3	6	42,766.4	4,758.6
Encana Corporation	99.6%	203.8	30	203.5	23	0.3	61	73,381.8	56,682.6
Signalta Resources Limited	64.3%	196.2	31	-	58	196.2	7	2,123.9	549.8
Terrex Energy Inc.	85.6%	182.3	32	154.0	27	28.3	35	3,743.1	1,282.7
Apache Canada Ltd.	83.6%	164.4	33	17.0	44	147.4	13	1,475.1	1,004.8
Conserve Oil Corporation	0.0%	150.5	34	150.5	28	-	63	3,068.7	150.5
Triaxon Oil Operations Ltd.	0.0%	147.8	35	18.0	42	129.8	15	643.0	147.8

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

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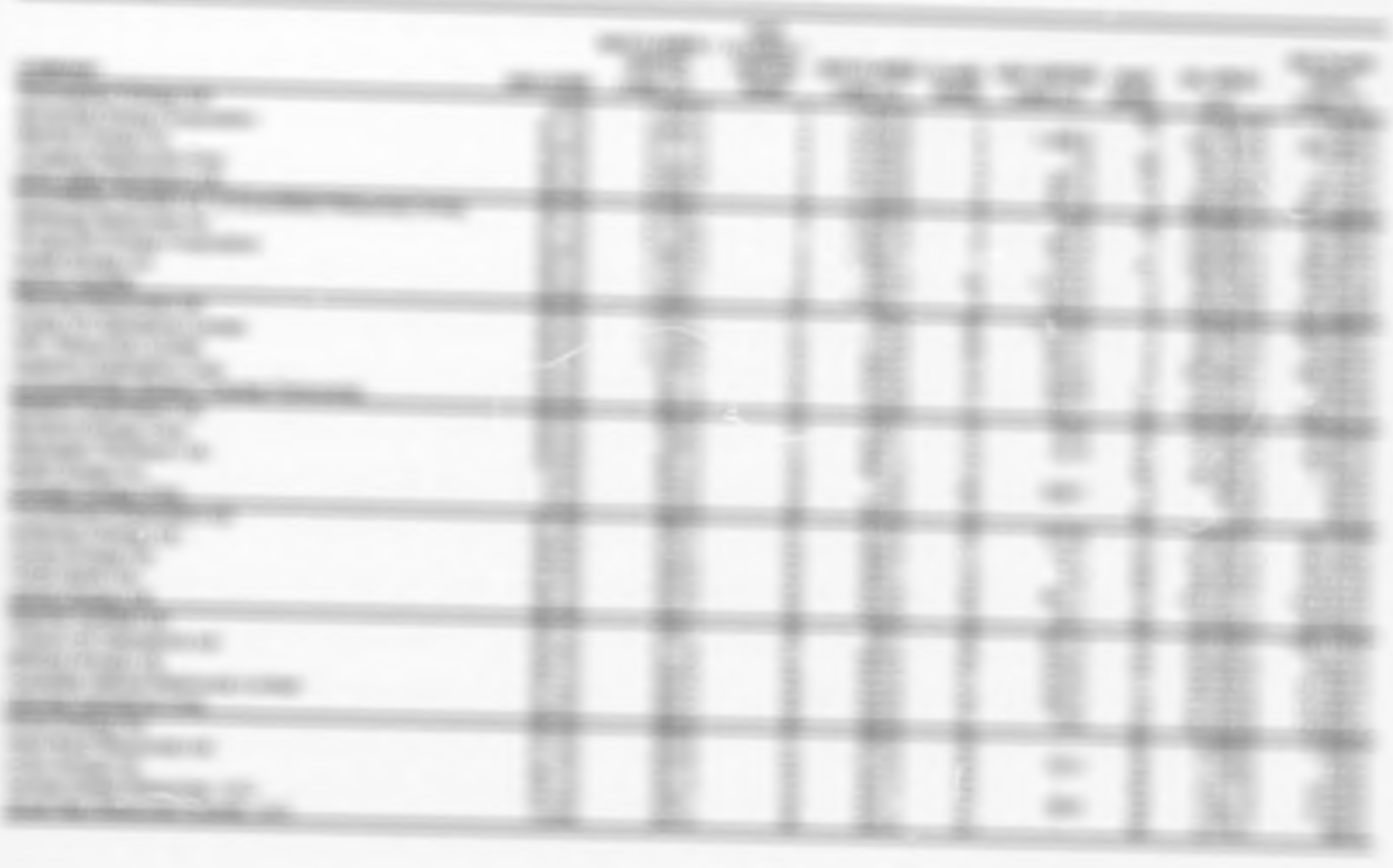
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]



[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	83.7%	526.1	36	90.6	28	23.7	87	2,960.2	1,972.5
[illegible]	66.2%	800.1	37	225.4	52	74.7	28	34,873.3	31,365.6
[illegible]	55.4%	250.8	26	28.7	91	262.1	12	45,159.2	45,127.1
[illegible]	69.9%	254.1	36	158.4	56	57.7	52	8,098.4	2,465.4
[illegible]	59.9%	316.4	45	210.8	50	3.8	89	92,348.8	54,213.3
[illegible]	56.3%	215.3	27	88.3	69	126.3	13	8,371.3	31,761.3
[illegible]	66.7%	188.3	62	189.8	97	1.7	73	11,187.7	8,878.3
[illegible]	67.8%	188.1	45	188.3	36	0.1	91	31,398.3	8,368.7
[illegible]	56.8%	183.7	49	102.5	45	81.2	25	15,736.8	12,775.8
[illegible]	8.1%	102.8	45	102.8	56	-	62	2,465.3	178.7
[illegible]	28.2%	102.7	46	102.7	46	-	62	1,765.3	218.1
[illegible]	73.4%	102.6	47	102.6	61	-	62	1,236.4	933.8
[illegible]	64.9%	100.8	45	3.4	77	102.1	19	736.3	1,419.7
[illegible]	58.9%	108.8	46	10.8	67	108.8	23	46,338.7	34,360.2
[illegible]	59.9%	108.7	39	108.7	46	-	62	89,134.8	92,248.3
[illegible]	28.2%	118.2	67	118.2	46	-	62	1,625.3	102.3
[illegible]	58.9%	113.8	56	113.8	46	-	62	23,405.3	11,388.2
[illegible]	62.9%	104.7	53	104.4	45	0.3	78	13,173.8	1,367.1
[illegible]	0.9%	102.8	54	102.8	46	-	62	3,518.8	108.8
[illegible]	3.0%	62.8	56	62.8	47	-	62	946.1	62.8
[illegible]	58.8%	97.8	46	8.7	68	91.3	24	30,678.8	40,462.1
[illegible]	67.9%	84.8	57	77.9	51	6.9	58	5,654.4	3,426.4
[illegible]	58.2%	62.1	56	3.8	72	78.8	27	13,568.8	4,373.8
[illegible]	58.8%	78.4	56	-	83	78.4	28	4,852.2	3,838.4
[illegible]	58.3%	75.8	63	68.8	56	3.7	63	13,668.7	11,174.3
[illegible]	58.8%	71.8	61	61.7	47	31.7	62	18,401.7	33,971.2
[illegible]	58.8%	68.8	62	68.8	59	3.8	78	3,668.3	4,874.8
[illegible]	67.7%	61.8	63	34.8	65	27.8	38	8,328.8	2,668.3
[illegible]	58.8%	62.8	64	54.2	76	28.1	44	12,248.8	5,852.4
[illegible]	58.8%	77.8	62	48.7	54	8.8	87	13,832.7	28,871.7
[illegible]	58.3%	54.8	68	26.8	63	28.8	62	8,126.8	7,368.2
[illegible]	58.1%	51.8	67	-	83	51.8	54	6,68.8	1,328.8
[illegible]	58.7%	48.7	68	-	83	48.7	55	3,668.3	2,702.8
[illegible]	3.0%	46.1	63	46.1	68	-	62	1,46.2	46.1
[illegible]	28.7%	44.8	73	-	83	44.8	36	423.1	62.8

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
RED DEER CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED ($1000 m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000 m^3$)	FLARE RANK	GAS VENTED ($1000 m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000 m^3$)
South Ridge Management Ltd.	0.0%	43.5	71	43.5	56	-	82	275.6	43.5
Gold Ridge Investments Corporation	0.0%	40.5	72	-	80	40.5	37	128.4	40.5
Marcal Energy Inc.	90.4%	39.2	73	39.2	58	-	82	14,503.9	406.8
TimberRock Energy Corp.	66.9%	31.8	74	30.9	60	0.9	75	234.7	96.2
Quatro Resources Inc.	98.8%	31.0	75	-	80	31.0	41	3,596.8	2,545.2
Suncor Energy Oil and Gas Partnership	99.9%	29.3	76	28.3	62	1.0	74	43,490.8	19,283.8
Vermilion Resources Ltd.	98.2%	26.5	77	-	80	26.5	43	1,305.5	1,472.9
Petromin Resources Ltd.	34.8%	25.3	78	25.3	64	-	82	126.5	38.8
Garnet Resources Ltd.	62.1%	24.3	79	-	80	24.3	45	151.0	64.1
Jayhawk Resources Ltd.	57.8%	24.0	80	24.0	66	-	82	189.8	56.8
Barrick Energy Inc.	99.2%	23.9	81	-	80	23.9	46	9,781.9	3,078.2
Sagar Resources Ltd.	99.0%	20.9	82	-	80	20.9	48	935.2	1,992.8
Regent Resources Ltd.	97.8%	18.7	83	3.0	74	15.7	50	3,872.1	865.9
Arrow Point Oil & Gas Ltd.	98.7%	15.5	84	12.8	68	2.7	67	2,627.0	1,169.4
Bayhaw Energy Ltd.	99.2%	15.4	85	-	80	15.4	51	6,344.3	1,941.1
Sharpet Resources Ltd.	96.1%	11.0	86	-	80	11.0	54	186.1	278.5
Tykewest Limited	91.8%	10.4	87	-	80	10.4	55	681.8	127.4
Silver Blaze Energy Ltd.	34.7%	9.8	88	-	80	9.8	56	137.3	15.0
Westdrum Energy Ltd.	97.5%	9.8	88	2.3	75	7.5	58	946.7	394.9
Plains Midstream Canada ULC	0.0%	9.5	89	9.5	70	-	82	-	-
Vero Energy Inc.	0.0%	8.3	90	8.3	71	-	82	77.6	8.3
Bashaw Oil Ltd.	97.7%	6.9	91	-	80	6.9	59	1,237.2	296.3
Sword Energy Corp.	83.7%	5.4	92	-	80	5.4	61	519.5	33.2
NEO Exploration Inc.	83.0%	5.3	93	-	80	5.3	62	976.0	31.2
Sekur Energy Management Corp.	23.1%	5.0	94	-	80	5.0	63	48.8	6.5
Zargon Oil & Gas Ltd.	99.5%	5.0	94	-	80	5.0	63	2,653.4	991.1
Superman Resources Inc.	99.9%	4.4	95	-	80	4.4	64	17,079.3	7,968.2
Milen's Oilfield Enterprises Ltd.	99.8%	4.1	96	-	80	4.1	65	124.0	2,626.8
KinMerz Oil & Gas Inc.	0.0%	3.1	97	3.1	73	-	82	284.7	3.1
Mosaic Energy Ltd.	99.4%	2.7	98	-	80	2.7	67	653.9	446.6
Camino Industries Inc.	99.7%	1.7	99	-	80	1.7	70	226.9	486.3
Paramount Resources Ltd.	100.0%	1.5	100	-	80	1.5	71	4,965.3	8,350.8
Traverse Energy Ltd.	99.9%	1.3	101	-	80	1.3	72	402.8	1,615.0
Tri-Mont Corporation Ltd.	31.6%	1.3	101	-	80	1.3	72	15.6	1.9
Coastal Resources Limited	96.6%	1.2	102	1.2	76	-	82	551.2	35.3

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
RED DEER CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED ($1000\ m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000\ m^3$)	FLARE RANK	GAS VENTED ($1000\ m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000\ m^3$)
Sonde Resources Corp.	100.0%	1.2	102	-	80	1.2	73	1,432.5	3,934.4
Forent Energy Ltd.	0.0%	0.7	103	-	80	0.7	76	84.6	0.7
Nytis Exploration Company Inc.	99.7%	0.6	104	-	80	0.6	77	1,134.4	180.2
Bentley Oil & Gas Ltd.	99.4%	0.2	105	-	80	0.2	80	843.1	32.9
Canadian Abraxas Petroleum, ULC	100.0%	0.2	105	0.2	78	-	82	5,981.8	4,432.8
Sinopec Daylight Energy Ltd.	0.0%	0.1	106	0.1	79	-	82	407.5	0.1
Trident Exploration (Alberta) Corp.	99.9%	0.1	106	-	80	0.1	81	67.1	99.4
AltaGas Ltd.	100.0%	-	107	-	80	-	82	22.5	170.7
ARC Resources Ltd.	100.0%	-	107	-	80	-	82	409.8	1,159.9
Arsenal Energy Inc.	100.0%	-	107	-	80	-	82	496.7	510.5
Artemis Exploration Inc.	100.0%	-	107	-	80	-	82	537.0	5.0
Avatar Energy Ltd.	100.0%	0.0	107	0.0	80	0.0	82	125.4	1.2
Birchill Exploration Limited Partnership	100.0%	-	107	-	80	-	82	205.9	846.1
Canyon Oil & Gas Corporation	100.0%	-	107	-	80	-	82	102.2	636.3
Condor Canada Petroleum Inc.	100.0%	-	107	-	80	-	82	2,649.7	385.7
Conserve Oil & Gas No. II Corporation	100.0%	-	107	-	80	-	82	23,634.3	3,376.1
Conserve Oil 6th Corporation	0.0%	0.0	107	0.0	80	0.0	82	73.5	-
Cutpick Energy Inc.	100.0%	0.0	107	0.0	80	0.0	82	2,720.7	40.0
Elkwater Resources Ltd.	100.0%	0.0	107	0.0	80	0.0	82	141.3	529.9
Ember Resources Inc.	100.0%	0.0	107	0.0	80	0.0	82	540.8	42.7
Equal Energy Ltd.	100.0%	0.0	107	0.0	80	0.0	82	1,025.6	1,390.1
Fairwest Energy Corporation	100.0%	-	107	-	80	-	82	74.7	157.9
Ferrybank Resources Ltd.	100.0%	-	107	-	80	-	82	1,810.0	487.2
Grandview Exploration Inc.	100.0%	-	107	-	80	-	82	1,637.6	3.5
Knowledge Energy Inc.	100.0%	-	107	-	80	-	82	1,618.9	5,827.6
Marquee Energy Ltd.	100.0%	-	107	-	80	-	82	13,482.6	43,875.0
Northern Patriot Oil & Gas Ltd.	100.0%	-	107	-	80	-	82	587.6	551.7
Owl River Resources Ltd.	100.0%	-	107	-	80	-	82	467.5	1,087.6
Predator Oil Ltd.	100.0%	-	107	-	80	-	82	321.2	472.6
Renegade Petroleum Ltd.	100.0%	-	107	-	80	-	82	258.1	272.4

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
RED DEER CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED ($1000 m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000 m^3$)	FLARE RANK	GAS VENTED ($1000 m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000 m^3$)
RMP Energy Inc.	100.0%	-	107	-	80	-	82	447.2	2,319.9
Shapco Resources Ltd.	100.0%	-	107	-	80	-	82	1,095.8	831.6
Terra Energy Corp.	100.0%	-	107	-	80	-	82	722.8	40.0
TORC Oil & Gas Ltd.	0.0%	-	107	-	80	-	82	5.1	-
Vesta Energy Ltd.	100.0%	-	107	-	80	-	82	3,495.4	9,152.4
Wild Stream Exploration Inc.	100.0%	-	107	-	80	-	82	1,738.0	1,708.5
Znx Energy Ltd.	100.0%	0.0	107	0.0	80	0.0	82	865.9	745.7
TOTALS FOR RED DEER	**98.4%**	**48,809.5**		**37,094.1**		**11,715.4**		**3,229,835.6**	**3,069,781.9**

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

[illegible] FLARED + VENTED VOLUME[1]
ST. ALBERT CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED (1000 m^3)	GAS FLARED + VENTED RANK	GAS FLARED (1000 m^3)	FLARE RANK	GAS VENTED (1000 m^3)	VENT RANK	OIL PROD (m^3)	SOL'N GAS RNGE (1000 m^3)
Point West Petroleum Ltd.	53.3%	21,543.6	1	17,267.9	8	4,275.7	1	1,216,287.2	323,566.6
Coral Hill Energy Ltd.	91.7%	21,287.1	2	21,245.3	1	21.8	45	344,551.0	45,623.2
Murphy Oil Company Ltd.	75.3%	15,224.8	3	15,224.8	2	-	83	328,521.1	78,131.7
Arcan Resources Ltd.	24.7%	15,440.5	4	15,414.8	3	25.8	43	250,583.1	34,474.7
Devon Canada	92.0%	10,373.7	5	10,087.1	5	479.6	13	537,474.6	139,861.2
Second Wave Petroleum Inc.	92.5%	9,525.5	6	9,382.8	6	136.5	31	196,245.6	53,956.0
Pengrowth Energy Corporation	96.1%	8,614.0	7	8,629.1	7	1,884.8	4	708,432.2	220,972.4
TriOil Resources Ltd.	44.2%	5,396.3	8	5,396.3	8	-	83	91,425.2	9,671.4
Crescent Point Energy Corp.	61.0%	4,807.8	9	4,807.8	9	-	83	53,338.6	12,977.2
Harvest Operations Corp.	79.5%	4,421.1	10	3,731.3	10	689.8	10	383,983.3	31,533.4
Shell Canada Energy	97.7%	3,668.4	11	2,956.5	17	1,211.9	5	737,638.1	166,760.8
Husky Oil Operations Limited	86.0%	3,111.6	12	2,213.0	15	898.6	8	69,670.2	22,191.0
Athabasca Oil Corporation	82.1%	3,013.1	13	2,991.3	11	21.8	45	16,122.1	36,321.8
Apache Canada Ltd.	94.7%	2,915.4	14	2,614.5	12	300.9	19	345,261.5	52,999.6
Lone Pine Resources Canada Ltd.	74.9%	2,743.8	15	0.8	94	2,741.8	3	304,541.5	10,958.5
Trilogy Resources Ltd.	98.9%	2,585.7	16	2,136.2	14	190.5	23	514,715.9	21,629.3
Raydex Energy Ltd.	68.8%	2,543.2	17	2,159.1	13	84.1	39	111,422.8	8,468.6
Echoes Ltd.	16.2%	2,341.2	18	101.2	54	2,240.0	3	34,488.3	2,662.4
Canadian Natural Resources Limited	95.8%	2,272.6	19	1,338.9	21	933.7	7	277,234.3	55,214.6
Wenzel Energy Inc.	77.4%	2,115.0	20	2,090.3	16	24.7	45	118,467.8	9,354.3
Pinecrest Energy Inc.	98.1%	2,042.8	21	1,748.4	22	294.3	18	197,886.3	8,219.8
Exeno Energy Inc.	81.0%	1,746.1	22	1,746.1	18	-	83	14,704.6	4,483.6
TORC Oil & Gas Ltd.	16.1%	1,666.9	23	1,527.2	19	139.6	22	11,352.9	1,987.1
Sure Energy Inc.	89.2%	1,528.5	24	1,373.4	20	153.1	21	31,016.6	14,137.2
ARC Resources Ltd.	98.3%	1,253.0	25	1,053.7	23	199.3	19	256,258.6	35,457.4
Surge Energy Inc.	95.1%	1,230.1	26	982.6	58	1,190.2	6	87,210.3	24,991.5
Petrobakken Energy Ltd.	72.6%	982.5	27	970.7	24	11.8	55	20,665.0	3,079.0
Long Run Exploration Ltd.	97.6%	962.9	28	394.7	50	568.2	11	251,107.4	40,275.3
Arsenal Energy Inc.	20.0%	961.3	29	919.3	25	42.0	30	20,075.3	1,275.9
Response Energy Corporation	65.7%	803.8	30	346.1	34	454.6	12	8,395.1	2,126.1
NEP Canada ULC	98.3%	580.1	31	575.1	26	5.0	53	97,533.8	24,371.6
Celtic Exploration ULC	80.7%	543.6	32	538.7	27	14.9	54	16,312.3	5,661.5
Zargon Oil & Gas Ltd.	21.6%	435.4	33	408.5	28	26.9	42	2,964.1	555.5
Longview Oil Corp.	91.2%	404.1	34	404.1	29	-	83	21,337.7	4,573.6
Nordeau Resources Inc.	84.7%	362.9	35	362.9	31	-	83	16,486.9	2,963.0

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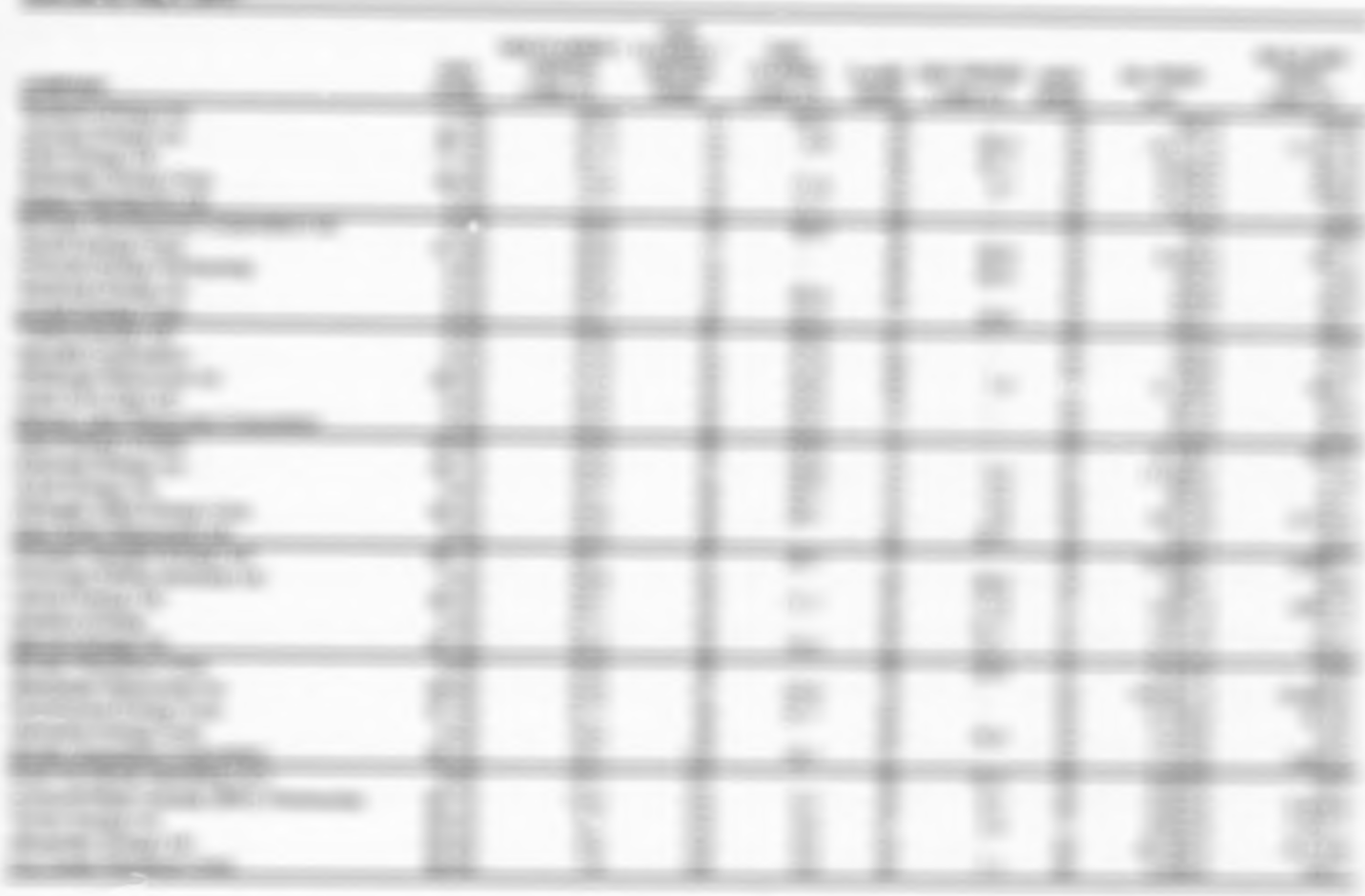

FIELD LOCATOR RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
BY ALBERT LOUISE OIL AND LOUISE BITUMEN BATTERIES FOR ALBERTA
2012 DATA: May 1, 2013

COMPANY	BA% CONS	GAS FLARED + VENTED (1000 m^3)	GAS FLARED + VENTED RANK	GAS FLARED (1000 m^3)	FLARE RANK	GAS VENTED (1000 m^3)	VENT RANK	OIL PROD (m^3)	ASL TO GAS PROD (1000 m^3)
NAL Resources Limited	50.7%	7.9	105	-	36	7.9	109	4,952.4	1,447.5
Alaska Energy Inc.	57.3%	5.8	106	5.8	60	-	83	1,536.9	273.6
Freeborn Resources Inc.	71.0%	5.3	107	-	36	5.3	103	5,397.2	20.3
Baring Exploration Company Ltd.	76.8%	5.1	108	-	35	5.1	94	536.9	24.1
Dualstar Resources Inc.	69.8%	4.3	109	-	36	4.3	85	537.5	2,162.4
One Earth Oil & Gas Inc.	50.3%	4.1	110	4.1	60	-	83	534.3	3,374.7
Crescent Sky Energy Inc.	3.0%	3.6	111	-	36	3.6	67	357.0	3.6
Eastnet Resources Ltd.	3.0%	3.3	112	-	36	3.3	68	132.5	3.3
Navotay Resources Ltd.	88.8%	2.4	113	-	36	2.4	73	555.7	1,272.2
Fenceline Energy Operating Corp.	90.3%	2.4	113	2.2	51	0.2	91	456.3	313.2
Terragenic Petroleum Ltd.	98.3%	2.3	114	2.3	60	-	83	2,786.2	117.0
ExhiMax Oil & Gas Inc.	94.3%	2.2	115	2.2	51	-	83	5,275.9	39.7
Alta Resources Ltd.	90.7%	2.0	116	-	36	2.0	73	266.9	21.5
Vero Energy Inc.	99.8%	2.0	116	-	36	2.0	73	294.5	555.8
Owl River Resources Ltd.	92.8%	1.8	117	-	36	1.8	74	235.6	3.6
Tidewater Drilling Ltd.	3.0%	1.7	118	-	36	1.7	75	255.7	1.7
Pubg Petroleum Inc.	89.8%	1.7	118	-	36	1.7	75	453.1	16.6
Anderson Energy Ltd.	99.8%	1.5	119	1.1	52	0.4	79	575.9	348.5
Delphi Energy Corp.	3.0%	1.5	119	-	36	1.5	76	798.9	1.5
Petrobank Energy and Resources Ltd.	3.0%	0.4	120	-	36	0.4	79	104.5	0.4
Sunshine Oilsands Ltd.	3.0%	0.1	121	-	36	0.1	82	74.5	0.1
42nd Gas Ltd.	100.0%	-	122	-	36	-	83	240.9	722.8
Arc IT Limited Ltd.	100.0%	-	122	-	36	-	83	8,936.9	523.1
Atlantis Exploration Inc.	3.0%	-	122	-	36	-	83	37.0	-
Blaze Energy Ltd.	100.0%	-	122	-	36	-	83	68.9	239.6
Bounty Developments Ltd.	100.0%	-	122	-	36	-	83	252.9	1.5
Cequence Energy Ltd.	100.0%	-	122	-	36	-	83	559.9	39.0
Clearbrook Resources Inc.	100.0%	-	122	-	36	-	83	2,835.0	311.0
Converse Oil & Gas Inc. II Corporation	3.0%	-	122	-	36	-	83	93.9	-
Cyrus Resources Ltd.	100.0%	-	122	-	36	-	83	1,098.5	137.1
Donville Energy Inc.	100.0%	-	122	-	36	-	83	27.1	160.4
Dominion Energy Corporation	100.0%	-	122	-	36	-	83	1,329.9	1,151.5
Detector Exploration Ltd.	100.0%	-	122	-	36	-	83	676.5	7.0
Evolve Resources Inc.	100.0%	-	122	-	36	-	83	159.9	59.4
Gateway Petroleum Inc.	100.0%	-	122	-	36	-	83	1,28.7	104.5

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
ST. ALBERT CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED ($1000 m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000 m^3$)	FLARE RANK	GAS VENTED ($1000 m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000 m^3$)
Hawk Exploration Ltd.	100.0%	-	122	-	96	-	83	264.0	13.0
Imperial Oil Resources	0.0%	-	122	-	96	-	83	42.3	-
Inception Exploration Ltd.	100.0%	-	122	-	96	-	83	3,082.1	7,862.5
Ish Energy Ltd.	100.0%	-	122	-	96	-	83	563.6	53.9
Land Petroleum International Inc.	0.0%	-	122	-	96	-	83	17.0	-
Legend Energy Canada Ltd.	0.0%	-	122	-	96	-	83	211.4	-
Linklater Lp	100.0%	-	122	-	96	-	83	808.7	2.3
MOGL Corp.	100.0%	-	122	-	96	-	83	133.1	393.1
Ontine Energy Inc.	100.0%	-	122	-	96	-	83	423.1	374.8
Revive Energy Corp.	100.0%	-	122	-	96	-	83	29.3	2.0
RIA Resources Corp.	100.0%	-	122	-	96	-	83	1,647.2	1,329.3
Rife Resources Ltd.	100.0%	-	122	-	96	-	83	1,148.1	382.8
Sabanero Energy Corp.	0.0%	-	122	-	96	-	83	281.8	-
Scollard Energy Inc.	100.0%	-	122	-	96	-	83	332.9	229.0
Sunridge Energy Corp.	100.0%	-	122	-	96	-	83	305.4	10.6
Sunrise Energy Ltd.	0.0%	-	122	-	96	-	83	543.2	-
Tamarack Valley Energy Ltd.	0.0%	-	122	-	96	-	83	11.4	-
Trihawk Energy Ltd.	100.0%	-	122	-	96	-	83	21.1	2.1
Twin Butte Energy Ltd.	100.0%	-	122	-	96	-	83	2,853.3	1,191.6
Westhill Resources Limited	100.0%	-	122	-	96	-	83	914.6	5,809.5
Yoho Resources Inc.	100.0%	-	122	-	96	-	83	221.0	2,490.5
TOTALS FOR ST. ALBERT	**90.9%**	**174,521.1**		**152,087.4**		**22,433.7**		**8,184,568.3**	**1,911,106.0**

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
WAINWRIGHT CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED ($1000\ m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000\ m^3$)	FLARE RANK	GAS VENTED ($1000\ m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000\ m^3$)
Husky Oil Operations Limited	65.6%	31,883.0	1	2,655.5	5	29,227.5	1	1,232,213.0	92,776.1
Canadian Natural Resources Limited	77.7%	16,044.0	2	127.6	32	15,916.4	2	430,905.3	71,963.9
Harvest Operations Corp.	83.7%	10,106.0	3	6,253.1	1	3,852.9	5	597,001.2	62,013.0
Gear Energy Ltd.	61.7%	7,574.6	4	78.1	39	7,496.5	3	187,230.5	19,766.9
Devon Canada	71.0%	6,643.0	5	-	66	6,643.0	4	251,773.8	22,886.4
Apache Canada Ltd.	86.1%	6,574.4	6	3,578.4	3	2,996.0	8	166,745.4	47,441.8
Talisman Energy Inc.	81.0%	5,562.4	7	2,455.2	6	3,107.2	7	646,552.8	29,223.5
Charger Energy Corp.	61.7%	4,889.6	8	4,882.6	2	7.0	60	21,639.8	12,770.1
Bonavista Energy Corporation	82.9%	3,976.0	9	723.2	16	3,252.8	6	95,018.1	23,268.3
Penn West Petroleum Ltd.	90.9%	3,878.9	10	3,000.7	4	878.2	13	239,322.2	42,470.8
Perpetual Energy Operating Corp.	85.9%	2,955.9	11	85.5	38	2,870.4	9	150,537.2	21,014.7
Surge Energy Inc.	80.4%	2,268.7	12	2,221.8	7	46.9	36	100,833.9	11,551.4
NuVista Energy Ltd.	68.1%	2,221.0	13	740.2	15	1,480.8	11	100,988.0	6,955.0
Verity Energy Ltd.	55.3%	1,843.3	14	1,843.3	8	-	74	5,484.0	4,126.6
Lone Pine Resources Canada Ltd.	84.8%	1,791.5	15	261.4	26	1,530.1	10	20,122.4	11,748.2
Black Shire Energy Inc.	87.7%	1,631.5	16	1,629.4	9	2.1	65	306,384.3	13,306.1
Crescent Point Energy Corp.	94.8%	1,622.4	17	1,568.1	10	54.3	32	114,026.6	31,169.0
Goldenkey Oil Inc.	14.7%	1,500.7	18	1,500.7	11	-	74	1,691.3	1,758.6
Twin Butte Energy Ltd.	87.3%	1,198.7	19	718.0	17	480.7	14	71,209.3	9,418.6
Palliser Oil & Gas Corporation	9.8%	1,160.7	20	-	66	1,160.7	12	36,210.8	1,286.3
Cutpick Energy Inc.	97.1%	1,092.6	21	1,092.5	12	0.1	73	92,540.8	38,009.9
Arsenal Energy Inc.	81.4%	1,028.4	22	895.1	13	133.3	24	70,149.4	5,521.3
Muirfield Resources Ltd.	79.5%	950.7	23	878.1	14	72.6	30	16,512.0	4,632.6
Long Run Exploration Ltd.	88.7%	781.8	24	318.4	24	463.4	15	54,172.2	6,944.7
Equal Energy Ltd.	85.7%	661.5	25	521.9	19	139.6	20	21,558.1	4,622.2
Charger Energy Corp.	51.6%	568.9	26	568.9	18	-	74	2,003.8	1,176.3
Zargon Oil & Gas Ltd.	95.9%	503.0	27	449.3	21	53.7	33	58,413.8	12,265.1
Forge Petroleum Corporation	25.5%	455.1	28	455.1	20	-	74	2,276.9	610.8
Fairwest Energy Corporation	11.7%	394.3	29	355.5	22	38.8	38	6,861.2	446.7
Rock Energy Inc.	82.0%	391.3	30	0.4	65	390.9	16	39,331.9	2,179.3
Petrocapita GP I Ltd.	0.0%	319.0	31	319.0	23	-	74	5,310.7	319.0
Hermes Financial Inc.	0.0%	275.2	32	275.2	25	-	74	3,416.1	275.2
Barrick Energy Inc.	94.7%	274.0	33	34.0	52	240.0	17	45,360.0	5,194.3
Taku Gas Limited	42.3%	262.8	34	126.5	33	136.3	21	5,680.8	455.8
Pengrowth Energy Corporation	98.7%	220.4	35	86.0	37	134.4	23	99,740.2	16,870.9

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FIELD CENTRE RANKING OF OPERATORS - 2012 FLARED + VENTED VOLUME[1]
WAINWRIGHT CRUDE OIL AND CRUDE BITUMEN BATTERIES FOR ALBERTA
RUN DATE: May 1, 2013

COMPANY	GAS CONS	GAS FLARED + VENTED ($1000 m^3$)	GAS FLARED + VENTED RANK	GAS FLARED ($1000 m^3$)	FLARE RANK	GAS VENTED ($1000 m^3$)	VENT RANK	OIL PROD (m^3)	SOL'N GAS PROD ($1000 m^3$)
Ceno Energy Limited	30.9%	189.3	36	40.2	51	149.1	19	5,953.3	274.0
Westdrum Energy Ltd.	8.9%	187.1	37	186.7	27	0.4	72	1,071.2	205.4
Rife Resources Ltd.	89.7%	186.3	38	50.7	48	135.6	22	78,210.7	1,814.4
Tallgrass Energy Corp.	75.1%	174.5	39	159.2	28	15.3	52	6,158.7	700.7
NAL Resources Limited	86.6%	160.5	40	142.3	29	18.2	50	7,334.8	1,201.7
Avalon Exploration Ltd.	0.0%	159.2	41	-	66	159.2	18	10,225.6	118.7
Silverback Energy Ltd.	74.3%	141.4	42	126.0	34	15.4	51	1,445.6	549.9
Western Plains Petroleum Ltd.	0.0%	138.8	43	12.6	57	126.2	27	4,922.6	138.8
Shorthorn Exploration Ltd.	89.4%	135.3	44	135.3	30	-	74	2,533.1	1,270.2
Sedna Oil And Gas Ltd.	28.8%	133.5	45	133.5	31	-	74	619.6	187.6
Ener T Corporation	8.1%	128.0	46	-	66	128.0	25	3,001.3	139.2
Kasten Energy Inc.	53.7%	127.0	47	-	66	127.0	26	2,376.5	274.3
Magnum Energy Inc.	87.2%	124.9	48	105.2	36	19.7	48	5,197.2	973.8
Whitecap Resources Inc.	0.0%	124.1	49	124.1	35	-	74	2,906.6	124.1
Zeal Energy Inc.	68.9%	123.0	50	-	66	123.0	28	2,778.1	395.3
Cardinal Energy Ltd.	46.8%	110.2	51	61.8	44	48.4	34	6,907.3	207.2
Predator Oil Ltd.	86.2%	93.3	52	73.9	41	19.4	49	3,839.9	677.5
Croverro Energy Ltd.	0.0%	92.6	53	-	66	92.6	29	3,604.2	92.6
Enerplus Partnership	98.3%	91.6	54	67.1	43	24.5	45	143,921.2	5,298.3
Blackhawk Resource Operating Corp.	37.2%	77.9	55	77.9	40	-	74	2,665.0	124.0
MKE Canada Ltd.	52.9%	73.2	56	73.2	42	-	74	4,982.1	155.3
Cenovus Energy Inc.	99.5%	57.1	57	57.1	45	-	74	158,247.8	11,004.6
Canrock Energy Corp.	98.4%	55.7	58	55.7	46	-	74	7,756.4	3,368.2
611890 Alberta Inc.	0.0%	54.7	59	-	66	54.7	31	7,123.5	54.7
Onstad Energy Corp.	38.4%	52.3	60	52.3	47	-	74	1,495.5	84.9
RON Resources Ltd.	86.7%	47.2	61	47.2	49	-	74	521.4	354.2
Goodland Energy Ltd.	71.3%	47.1	62	-	66	47.1	35	2,012.6	163.9
AvenEx Energy Corp.	30.5%	43.4	63	31.9	53	11.5	55	3,587.8	62.4
Sojourn Energy Inc.	12.5%	41.9	64	-	66	41.9	37	1,870.0	47.9
Fort Calgary Resources Ltd.	86.8%	41.1	65	41.1	50	-	74	9,023.6	312.4
Brahma Resources Ltd.	0.0%	37.9	66	24.1	56	13.8	54	1,443.5	37.9
Pavilion Energy Corp.	76.5%	36.5	67	-	66	36.5	39	12,924.0	155.2
ConocoPhillips Canada (BRC) Partnership	99.4%	31.4	68	4.2	63	27.2	43	37,921.5	4,907.9
Crew Energy Inc.	99.3%	30.9	69	-	66	30.9	40	36,765.7	4,676.2
Spur Resources Ltd.	97.5%	29.9	70	-	66	29.9	41	1,254.6	1,208.3

[1] Caution is required when comparing to last year's report due to corporate mergers, acquisitions, and divestments.

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